NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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WORK FOR JULY.

JULY is the month of the early harvest. By the middle of the month, the upland hay will be, or ought to be deposited in the barn. That which remains uncut will be of much less value for the coming winter, than if it had been stored before it became hard and woody. We trust our readers have given heed to the advice we have already given them on this subject. Hay got into the barn, while it retains the properties of grass, is both more palatable and more nutritious, and for dairy purposes especially, this is of the utmost importance. It should be our object to cut it at such time, and make it in such a manner as to retain these properties.

And now the mower and tedder must be laid aside, and the reaper must come in their place. The rye, the wheat, the barley and the oats must be attended to in their season; and as it is with grass, so the grains should be cut before they are dead ripe. If they stand too long, more will be lost in harvesting. The crop will not bear handling so rapidly or so well, and the straw will be of greatly less value as forage. Good bright, early cut wheat and oat straw are being valued much more for fodder than they were formerly among us. Those who steam the food for their cows, and their number is every year increasing, cut and steam the straw and mix it with bran, oil cake, cotton-seed meal, or other grain. They find it nutritious and palatable food, and their cows thrive on it, and yield a full flow of milk.

Grain of all kinds, as soon as dry enough to keep securely, should be put under cover. It will be better both for the grain and straw. If suffered to remain in the shook, it is exposed to the rains, and in long storms the grain will swell and sprout, as was the fact with a large part of the western wheat the last season, which is the principal reason why we have had so much poor flour, and why good flour has been so high. Our small crops in New England can all be housed, and should be, as soon as practicable.

And now, too, we begin to get "aid and comfort" from our labor in the garden. The green peas and early potatoes and beets have come, and soon the string beans and sweet corn will be on the table. The cold and wet weather of May deferred the planting, and the gardens are late; but now those who persevered and planted the seed, and have

carefully tended the plants, are reaping the fruit of their labor. The summer fruits are now coming into use, and what can be more delicious than a bowl of fragrant strawberries or refreshing currants, with the evening meal. Do not insist upon sending these all to market. Let the boys and girls who have helped to raise and pick them, have a liberal share.

In the vicinity of the market it too often happens that the best of every thing and the earliest is sent to market, and only the refuse is used at home. Poor encouragement this to the good wife and the children. Even where market gardening is the leading business, the family should never be neglected. The first thing should be to make them comfortable and contented. and nothing contributes more directly to this end than a good supply of early vegetables and fruits, not doled out with a begrudging hand, as though every pea and berry used at home were so much money lost. No; let the family enjoy all they need, and sell the balance, and you will all be the happier and healthier for it. The farmer should always feel that he and his family are a unit,—that their interests are one and the same, and their enjoyments should be common. We should like to write a sermon from this text, and perhaps we may some time.

But just now we must say that the season thus far has been a fine one for the weeds, and it has required much more than the usual amount of labor to kill them. If cut up, they refuse to die. If buried they shoot up again directly. The cultivator and the hoe must be in constant motion. We need a weed tedder to keep stirring the weeds till the life is dried out of them. The wheel hoe is very useful in such seasons, as it will go over a large surface in a short time.

At any rate, there is no other way but to keep stirring the ground. The soil will not produce two crops at the same time, and the weeds must be kept down or corn will not grow. To finish the haying, to harvest the grain, to take care of the garden, and to keep down the weeds among the growing crops, will be the work of July, and upon our success in doing these will depend the result of our farming operations for the year.

—A little alum mixed in chicken-food is recommended both as a preventive and cure of chicken cholera, by the *Prairie Farmer*.

PERMANENT FARM IMPROVEMENTS.

The farmer, as well as the mechanic or the tradesman, will not, and perhaps should not, be satisfied without adding something every year to his capital. It is not enough merely to support himself and his family; it is not enough to add something to the comfort of his family, in the shape of clothing and conveniences; but he needs to add something by which his operations can be carried on with greater facility, with less hard labor and with more profit. He needs to do something by which some portion of his land will yield a larger crop; and this should be some permanent improvement,—as grubbing up a piece of rough land and fitting it for the plough; draining or ditching another piece, fencing a third, digging and burying the stones in a fourth.

As his crops increase, he needs to add some stock every year, and this will enable him to cultivate more or cultivate better. He needs a mowing machine or horse rake, a new harness, better ploughs, new tools.

All these are additions to his capital. They enable him to do more work and better, and at a less cost. The farmer should look upon them as so much added stock in trade.

The mechanic and trader invest their earnings in their business, until it has reached the limits which circumstances justify, and then they often remove to a wider field of enterprise; and this is generally better for them than to invest their surplus in stocks or real estate, because they understand how to manage their business better than they do to manage stocks or other property. As they advance in business and expand it, they acquire skill in its management.

So the farmer can turn his earnings to better account in his business, than by investing them in other property. The increase in the beauty and productiveness of a ten acre lot, from the investment of five hundred dollars in its improvement, will afford him much more satisfaction than it will to count the six per cent. interest on five hundred dollars.

The farmer, then, after counting the cost, should decide what permanent improvement he can make each coming year. Perhaps he has a meadow which yields only poor, sour grasses, and yet is susceptible of being drained, and then by being dressed with sand and compost, and sown with herdsgrass and redtop, may be made to yield large crops of good hay.

If operations begin with the winter, haul on the sand while the ground is frozen,—it is the very best time,—and cut the ditch if he can. If it is too wet, wait till after haying next summer, and then cut as many ditches as are needed, and spread the sand, and haul on the compost, and sow the grass seed, and harrow it in. It is quite as well to seed down in the autumn, as in the spring. If you wait till you have cut the ditches before you haul on the sand, you will have to wait until another winter, and it will be two years before you get a crop of good hay.

Fencing with durable fences, may be considered a permanent improvement of the farm. If you have good land encumbered with stones, take them from this, rather than from some distant rocky pasture or poor land that will not be benefited by their removal, and you will kill two birds with one stone. You improve the land from which you take them, and at the same time get material for your fence. If you must use posts and rails, let the posts be cedar, chestnut or white oak, and if possible cut in the summer. The rails may be of white pine or red oak, got out in the winter.

Special attention should be given to make your exterior fences permanent and substantial. As to interior fences, have as few as you can get along with. It would be a permanent improvement of no small value to many farms, to remove one-half or more of the cross fences, and throw the small fields into large ones. Inquire if you cannot remove the cross walls to the outsides of the farm, and thus have sufficient material to lay over, in good shape, your exterior walls.

Have you a piece of good land near the house, always under your eye, and ever a noticeable feature in the face of your farm, that is disfigured by boulders, lying on the surface or partly buried in the soil, which are in the way of the plough and mowing machine? The loose ones should be hauled off as you have leisure, and the larger ones dug under and sunk, if possible, out of the reach of the plow. Will not the land be worth as much more as the labor will cost, besides getting rid of a nuisance and an eye-sore?

Have you a pasture that yields but little grass, and is covered with moss and bushes? What can you do to restore the feed? This is an important question and should be seriously asked with respect to much of the pasture land in New England. If it is near the barn—even if it is somewhat rough and rocky—had you not better plough it, and plant it one year. The sod is thin and loose, the grass roots having mostly died out, and it will decay and become mellow in one year. Then sow it down with several kinds of grass seed, and you will have a good pasture for ten years. If it is at a distance from home, so that it will be expensive to cart on manure, plough and sow rye and grass seed and harrow thoroughly, or harrow thoroughly and sow grass seed and plaster without the rye, harrowing again after the sowing. If it is an old pine plain, plough, and sow buckwheat, and when it is in the blossom plough it under and sow another crop. Plough this under in the fall. The next spring, sow clover and redtop, and harrow it smooth, and in the fall feed it off, and you will have a good pasture for some years. If you decide not to plough, sow on a liberal dressing of ashes and plaster, and sow redtop and harrow it thoroughly, and it will pay.

Does your farm need all these improvements? If so, do not attempt to make them all in one year, but decide for yourself which is most needed, and set about making one of them at least. It will cost some money, but it will be a good investment, better than bank stock.

LOCAL REPORTS ON AGRICULTURE.

The last Legislature of Iowa enacted that when any county or district agricultural society shall have raised for actual membership during the year any sum of money, it shall be entitled to an equal sum from the State treasury, not exceeding two hundred dollars, *provided* that the society shall make report on the condition of agriculture in the county or district to the secretary of the State society.

The affidavit of the treasurer is necessary, and when this is accompanied by the certificate of the secretary of the State society that a proper report has been made, the auditor issues his warrant for the amount to which the society is entitled.

Here is an important suggestion, and one that may be easily carried into effect. Let a proper report of the agriculture of each county and district be made a condition of receiving the State aid, and we should have an

agricultural survey of the whole State presented annually which would be of great value, and would do more to stimulate improvement and progress than is accomplished by the thousands of dollars now given in premiums for articles of accidental growth or for those which need no encouragement.

The giving of premiums for big squashes and beets, or even for apples and pears, the profits of which are sufficient inducement for their cultivation, is only money thrown away. However useful it may have been in the past, it is no longer required. But careful reports which would bring before us the changes and improvements in agriculture that are taking place in all and every part of the State,—the methods of culture, the condition of the crops, the stock, the dairy, the markets and the facilities for reaching them, the implements, labor and all the important subjects included in "agricultural reports,"—would be of great value. A series of questions might be prepared, which all Societies receiving State aid should be required to answer truly and honestly before receiving their share of the bounty.

This subject is respectfully commended to the Legislatures of the several New England States.

MORTALITY AMONG VERMONT SHEEP.

The singular disease of which we gave some account on page 321, appears to be quite general in the eastern parts of Vermont. A gentleman in Vershire informs Dr. Boynton that "sheep are dying in large numbers in every direction, and there will not be lambs enough raised to make the number good. Lambs are dying both here and in the neighboring towns of New Hampshire, in many flocks to the extent of two-thirds and three-fourth of all that are dropped," and he has information of the same import from other sections of the Connecticut valley.

In relation to the effect of the muriated tincture of iron which Dr. Boynton administered to six yearling bucks that were too weak to stand but a few moments at a time, and could with great difficulty be made to walk ten rods, and would take little or no food, he says, in the last *Mirror and Farmer*:—

We commenced giving them each a table-spoonful of the muriated tincture of iron, in water, three times a day. At the end of two days we could see a marked change. The rose color began to return to the blanched lips, the eye was brighter, the discharge from the nose less, and signs of a returning appetite were unmistakable.

Of the six thus treated, I killed one the second day by kindness—I choked it to death in trying to feed it some gruel it was too weak to swallow; the smallest and most feeble one of the lot died; the other four are now so well I have stopped my medication, and I regard their recovery beyond a doubt.

For the New England Farmer.

THE GARDEN IN JULY.

The backwardness of the spring, and consequent shortness of the growing season has tended strongly to concentrate work on growing crops; and in this concentration and hurry, some things may be slighted, or put off for others; and, with too many farmers, the garden is the one that is thought can be left till the field crops are laid aside. But is it economy to thus do? I think not, for every dollar gained from field crops, at the expense of neglect of the garden, two dollars are lost in the economy of the household, besides a great amount of satisfaction and enjoyment of the farmer and his family. It is better to let those crops suffer neglect, if any are to, where the least loss will occur, yet still better is it to hire extra help than let either suffer neglect.

The main work for the month is to hoe the advancing crops, to kill weeds, and stir the soil; for every weed that grows robs other plants and the soil of just the amount of elements that enter into the composition of the weed, and frequent stirring of the soil has the effect of manuring, warming and moistening it. The ground occupied by an early crop can be made to produce a second, by planting lettuce, cabbage, celery, turnips, &c., after removing the first. The following hints will serve to recall some of the labors in the garden during the month.

ASPARAGUS should receive a dressing of fine manure or superphosphate, worked lightly into the soil, and cutting cease, to let the roots recover from drafts made during the cutting season. If any tops are infected with the larvæ of the "asparagus beetle," cut and burn them; let the rest grow.

BEANS.—Plant dwarfs for late crop, pickling, &c. See that the Limas incline to the pole, and have strong encouragement to grow, by frequent hoeings when dry, and an occasional stimulant of liquid or other manure around the roots. Gather string beans as they become fit for the table, but leave some of the most prolific plants to go to seed.

BEETS.—Thin out where too thick, and use for greens,—they make excellent ones; keep them well cultivated. Seed may be sown early in the month for a late crop.

CABBAGE,—for winter use, may be transplanted any time up to the middle of the month. Those already set need frequent hoeing. There is no crop that requires more culture than cabbage in order to grow extra good

heads; frequent stirring the soil tends to encourage heading.

CELERY.—Prepare your beds and set it out, if not already done, although set now it often matures as early or goes ahead of earlier set. Manure high and work into the bottom of your trenches, and set the plants nine inches apart in the rows, which should be at least three feet apart.

CORN may still be planted for late use, canning or drying. A quick, rich soil is needed.

CUCUMBERS.—Save some of the earliest and best, grown on the second and third joints of the vine, for seed; keep others picked off as they come in size for use, gather for pickles and salting; hoe and keep clean of weeds. For pickles, seed may be planted early in the month.

EGG PLANTS need encouraging by frequent hoeing, giving liquid manure, &c.; earth up and stir the soil frequently for a mulch.

HERBS.—Cut them when about to come to flowering, dry them in the shade, or an airy room in the house, and when well cured, put up in paper bags or boxes, and lay away where they will keep dry.

RHUBARB.—Keep the seed stalks cut down, not allowing them to grow, as it injures and exhausts the roots; a little manure worked in around the roots has an excellent effect in assisting them to recover the spring cutting.

SEEDS.—The gardener who suffers all his earliest and best fruits to be gathered for eating, &c., and saves none to ripen, except late ones, soon finds that his crops deteriorate, or run out, and is obliged to renew his seeds from other sources; whereas had he saved from each variety some of the earliest and best specimens, they would not only have held their own, but might have improved in quality. All our cultivated vegetables have been brought to their present state of perfection by careful selection and saving of seed, &c., and judicious culture; and unless great care is used to retain these qualities, they are apt to deteriorate. All vegetables are as capable of improvement as animals, by superior breeding, by using corresponding means.

SWEET POTATOES.—Plants may be set the first of the month, in warm early localities, in conical hills or on ridges either, raised ten inches high, and well supplied with manure in the bottom. Set two plants to a hill, if in hills; on ridges set the plants sixteen inches apart. Hoe those already set by using the hoe or garden rake, and hauling the soil up the ridge or hill,—see that the vines are kept from rooting at the joints, by lifting, &c.

TURNIPS.—Sow Swedes or rutabagas early in the month; white or English turnips from the middle to the last.

GOOSEBERRIES.—Thin the fruit, where thick, using that removed for cooking; those left will be all the better for it. If you desire extra sized berries of this or the currant, thin to only a few on a bunch, and pinch off the end of the shoots, giving liquid manure liberally. Should the borer or currant worm infest the bushes, use diligence to destroy both moth and worms. Various devices are recommended for their destruction. Remove needless shoots, to save future pruning, and give the strength to bearing canes and fruit.

STRAWBERRIES.—As soon as the last of the crop is gathered, weed the bed thoroughly, fork in manure around and between the plants, and keep the runners cut, unless you wish new plants, when the ground should be well enriched and forked up mellow, and the runners encouraged to root therein. New beds may be formed by spading up through the old ones, leaving a ridge of plants between to spread their runners over the newly spaded ground.

W. H. WHITE.

South Windsor, Conn., 1868.

For the New England Farmer.

CIRCULATION OF SAP.

The FARMER of the 16th copies from the *Maine Farmer* a few lines about the flow of sap, which, to a Vermont farmer who has watched this phenomenon for forty years, makes the darkness surrounding this subject unusually visible.

"Spongioles," says the writer, "have a mysterious power of eliminating sap from the earth."

Of course sap includes the sugar also, which is a part of the sap. Mysterious, I should think, must be the power that makes sugar down there in the cold dark ground, frozen solid from ten to thirty inches. Suppose the sugar to be elaborated during the summer by the action of sun, air and light, the process will be a mysterious one, but has many analogies in nature's great work shop. Hydrogen and carbon, large constituents of sugar, are evolved largely in all directions, in summer. It may well be doubted whether sugar is "eliminated" from the roots of the cane.

Again,—neither the axe, the gouge, nor the auger show that the sap comes wholly from below. Further,—let there be three warm days in April, swelling the buds of the maple, and the sugar tastes of *buds*. In 1866 I made seven hundred pounds of "budded sugar," as we call it here in Vermont. Every old sugar-maker knows that the sap will run freely for hours when the mercury is falling and icicles forming from the spout to the bucket. On the theory that sap descends in cold weather, the pores of the wood being pinched, we should look upward for the sap. There is something curious and not yet explained about the flow of sap. In all the pores opened in the side of a tree by a hole half an inch in diameter and three-fourths of an inch deep,—in all of these pores and fibres, from top to root, there is not room for the barrel of sap that often issues thence. The *air* must be in a peculiar condition to produce

a "sap-day," and the sap *seems* to answer a soliciting influence, acting through the incision made in the live wood. Other outside influences are also indispensable conditions of a sugar year. Mild and frosty, crispy weather must alternate. Action and reaction, movement and rest seem to be a law of the sap-flow, but not of its circulation. For the spring may be all clouds, rain, mist, yet the sap is in the limbs, but you are none the richer or sweeter for it.

It has rained more or less each twenty-four hours for ten days. The foundation for grass, hay and small grain is well laid. C. N. A.

Chelsea, Vt., May 22, 1868.

REMARKS. — We feel proud of our race sometimes when we consider the extent of man's knowledge and the greatness of his exploits. There is poetry if not sublimity in the idea of his harnessing up steam as a coach horse; of his making a servant of the invisible "electric current;" of his resolving air and water to their prime elements; of his measuring the "mountains of the moon" with his telescope, or of his watching with his microscope the contests of the leviathans that inhabit a drop of water; but a different feeling is excited when he answers our question about the flow of sap, by the humble confession that he cannot "tell whence it cometh or whither it goeth." Our correspondent presents some "posers" for the *Maine Farmer*, and other learned botanists. We turn to the great American Cyclopædia, now extended to some twenty-two large volumes, and find the following article, which we suppose embodies the gist of present knowledge upon the subject:—

Sap, in botany, the fluid imbibed from the soil by plants and carried through their tissues, being the usual source of their nutrition and of their peculiar secretions. The external agencies in the vital principle of plants are water, heat and light. Water does not exist in nature in a pure state, but is constantly combined with earthy, saline, and gaseous matters. Most plants are furnished with roots, and these organs are so contrived that they can absorb these aqueous solutions, transmitting them through the different tissues to the various parts. This transmission is called the circulation of the sap, and alterations in its constituents are continually going on in its progress, that nearer the roots being destitute of certain principles which are found higher up the stem. Thus, before the sap reaches the leaf buds and leaves, a considerable change has taken place; but when exposed to the light by means of the expanded leaves a greater one occurs, which may be termed digestion, consisting in the decomposition of carbonic acid, the giving out of its oxygen into the air, and the combination of the carbon with other elements to form the various secretions of the plant, such as gum, sugar, starch, lignine, &c. The manner in which each plant elaborates from the same soil its essential products remains as yet unexplained. The cause of the motion of the sap has been a fruitful source of speculation among physiologists, and for a long time capillary attraction was adopted as the most probable. The opinion of Dutrochet, that exosmose and endosmose were the explanation, is now most generally received. Two special motions called rotation and cyclosis are also known The former is to be seen in the joints and cells of certain aquatic plants, such as *vallisneria, chara, nitella, &c.* This rotatory motion of greenish globules floating in the sap may be increased by raising the temperature till it reaches 77° F. Cyclosis occurs in such plants as have spiral vessels, and especially in the tissues of such as secrete a milky fluid known as the *latex*, which seems to bear the same relation to the plant that the blood does to the animal, and is more slightly organized and separated from the other fluids. To inspect these phenomena the compound microscope must be employed.

For the New England Farmer.

FARM LIFE IN NEW ENGLAND.

The picture of farm life, as drawn by "John" is indeed a gloomy and discouraging one, yet it may have its "sunny side." I have always lived upon a farm, and in an agricultural community, but have seldom seen a specimen of that miserable class of which he remembers "a whole neighborhood full;" nor can I believe that farmers' wives are inferior, physically or intellectually to women of the so-called higher stations of life. I well remember some, whose lives, prolonged to more than fourscore years, were spent in the farm-house, in the days, too, when labor-saving inventions were not, and when spinning, weaving, milking the cows, and taking care of pigs and poultry, were a customary part of their duties, who were cheerful, active, and intelligent; fond of society and of books, and interested in the great political, moral and social questions of the day.

The houses, too, which "John" describes,—where could he have found the originals! Very different is my idea of a farm-house. The large, pleasant old mansion, facing the south, —whether the road lay before it or behind it, —shaded by stately elms, with lilac and rose bushes growing beside the windows, and tulips, peonies and many-colored annuals blooming around the doors. A "best room" seldom used; a large, east room, with abundant windows, floor painted yellow, and an old-

fashioned clock in the corner; a capacious kitchen and sleeping-rooms twenty feet square, were characteristic of these homes of the true *New-English* nobility. In process of time, the house was modernized,—the grounds tastefully laid out,—the best room was named the parlor, and made the recipient of carpet, sofa, pictures and piano, but the pleasant east-room, almost always found in the old farm-houses, remains unchanged.

Such are the homes which the sons and daughters leave because of their unattractiveness! I believe that a more correct reason would be found in the false ideas of life gained from the pestilential literature which floods the country. Novels which paint city life in glowing colors, and speak of labor as synonymous with poverty or disgrace, are, to say the least, no blessing to society.

I would not ignore the darker side of the story. It is true that farming is not altogether the delightful employment that it might and should be made, and eventually will be; but what occupation is exempt from trials? I know of none so capable of unlimited improvement as agriculture, none so well adapted to develop normally the whole nature.

It is true that farmers' wives sometimes lose their health when it is most needed, and drag out a miserable existence which can scarcely be called life. But in almost every class of society the same sad story is told. In many cases the foundations of the disease were laid in the school-room, or shop.

It is true that some farm-houses are cheerless enough; but they are the exceptions. The majority of them in this vicinity, at least, though not "palatial residences," are cheerful, pleasant and homelike. They are usually occupied by their owners and often remain for several generations in the same family.

It is true that some men care little about making "home pleasant;" but I believe that such men are quite as apt to be found in superfine broadcloth, as in the plain suit of the farmer. Many a woman whom the world envies her elegant house and costly apparel, "has the weary, careworn, despairing look," which tells but too plainly of sorrow proudly and silently borne.

I have no fears that agriculture will suffer from a free discussion of its merits and demerits, but rather believe that in regard to usefulness, pleasantness and the character of those who follow it, it will bear comparison with any other calling whatever.

MATTIE.

Marlboro', Mass., June 3, 1868.

—Lewis F. Allen, in his American Cattle, estimates the number of neat cattle in the United States at 28,145,240, worth $950,051,778, and he very pertinently asks if an interest of such magnitude is not worthy of more care and study than we have hitherto given it.

For the New England Farmer.

KATIE.

BY ANNE G. HALE.

The tardy spring again hath brought
Her garland for the brow of May,
And every lagging breeze hath taught
The music of her roundelay.

The murmuring pines a new life fills,
As their old trunks the brooklet laves;
And all the river's margin thrills
To the glad anthem of its waves.

The sweet arbutus' modest blush
Lights with auroral glow the woods;
And joyous voices break the hush
Of the dim forest's solitudes.

I list the blue-bird's timid trill,
I hear the robin's merry notes;
And down the vale and o'er the hill
The perfume of the violet floats.

But sad to me the silvery flow
Of brook, and birdling's carol clear,—
A gentle cadence, soft and low,
I miss amid the spring-time cheer.

Oh! sweeter than the violet's grace,
And fairer than the May-flower's bloom,
The beauty of one meek young face
Comes not the season to illume.

When bleak winds from the hills swept down,
And all the plains were white with snow,
From her pale brow pain's thorny crown
Dropped in the grave, so dark and low.

The chill—the change—our hearts appalled,
To hers it brought a glad surprise;
Our souls to lonely sorrow called,
Hers to the joys of Paradise. . . .

'Tis o'er—her simple village life
Of lowly toil and pleasures few—
Yet, with all highest issues rife,
It will not, cannot fade from view.

But her smooth-parted, golden hair,
The soft glance of her dove-like eyes,
Her modest mien, her reverent air,
No more upon my vision rise.

Cease, plaining heart! Her fearless trust
Would chide these murmurs of regret—
As, now, above her sleeping dust,
The sunshine wakes the violet.

Keep the sweet memory death hath left—
The fragrance of her influence dear,—
Though of the blossom else bereft,
Its holiest presence lingers near.

Spared earth's decay, through God's great ruth,
She shall again to thee be given,
Blooming with a perennial youth,
In the eternal fields of Heaven.

The spring-time of her loving faith,
Unchilled by doubt or hope's delay—
Her amaranthine wreath of death—
Makes of her memory endless May.

FIGARO, BY IMPORTED CONSTERNATION.

The above cut is a very faithful representation of the stallion, Figaro, bred and owned by Orin Trow, Hardwick, Mass. He is a horse of perfect symmetry, combined with immense power, graceful in action, a remarkable walker as well as beautiful and rapid trotter. His color is a dark dapple bay of unusual richness,—is sixteen hands high, and weighs over 1200 lbs. Of his sire, Consternation, it may be said, that his qualities as a stock horse achieved for him a national reputation.

His dam was "Dolly," by "Green Mountain Morgan" or "Hale horse," a mare of great size, power and endurance. At five years old she was driven seventy-eight miles in a day, without apparent fatigue and could easily have

accomplished a hundred. Her dam and grandam were mares of the same general type; therefore it will be seen that Figaro's qualities are hereditary, rather than accidental. His colts and fillies possess in a marked degree the characteristics of the thoroughbred, and while they are making elegant carriage horses and fine roadsters, they are also giving a very flattering promise for the turf. He is proving himself of incalcuable benefit to the breeders of New England.

MUTTON SHEEP.

An English correspondent of the *Country Gentleman*, after alluding to the fact that from six to eight thousand "hoggets,"—yearling sheep—are sold every Saturday at Norwich market, at from $12 to $14.50 per head, remarks that these sheep are nearly all what is called half bred, i. e., from some kind of dark-faced Down ewe, by a Lincoln, Leicester or Cotswold ram, and for early maturity and the profitable production of excellent mutton, are hard to beat. Alluding to an article he had seen by an American writer in which the Cotswold was recommended as the breed for our farmers to take up, he says:—

I am of opinion that the writer is a little mistaken in his deductions, for in addition to the fact, that by cross-breeding we attain not only early maturity, but a far greater disposition and aptitude to fatten than is found in any pure breed, the Cotswold, in common with every other white-faced, long-wooled sheep, carries a large amount of fat in proportion to its lean meat—the meat is coarse in the "grain." Whereas, in the South-Down, and every other dark-faced, short-wooled breed, these characteristics are exactly reversed. I venture to predict that if the great American people is to be "educated up" to a taste for mutton, it will be of the Down, or half-breed sort. Probably the best cross of all is that between the South-Down ewe and Leicester, Cotswold or other long-wooled ram.

SHORT-HORNS FOR BURLINGTON, VT.—Two weeks since we noticed the purchase of several fine animals by F. M. Van Sicklen and J. A. Shedd of this town. We see by the *Country Gentleman* that Mr. Shedd has purchased of Hon. A. B. Conger, Waldberg, N. Y., the following additional animals:—

Mazurka 8th and *Constance 3d*, both bred by the late R. A. Alexander, and got by his prize bull Albion; *Queen of Diamonds*, bred by Samuel Thorne, and got by 2d Grand Duke (12961,) out of imported Darlington 6th; *Lelia*, bred by the late F. M. Rotch, and got by imported Grand Duke of Oxford; also, *Constantia* and *Constantia 2d*, bred by himself, both out of Constantia 3d, the first got by Buttercup 2d, son of 2d Grand Duke, and the second by Udora's son of Grand Turk (12969).

From the New York Ledger.

OUT WEST.

BY ETHEL LYNN.

Joe Hilton sat in his easy chair,
Nothing he seemed to see,
Though a little woman's tiny hand
Lay resting on his knee.
Straight in the fire his glance was bent,
Unscorched by its sullen glow,
Till a woman's question broke his dream
With, "What are you thinking, Joe?"

Back from the border land he came,
Back from the prairie swell;
Back from the rustling fields of corn,
Back to his black-robed Nell.
"Thinking, my tiny, quiet wife?
Where I shall build my nest;
For when the maple flushes red,
We are going, dear, 'Out West.'

"Going where men can win a home,
Where the corn is glad to grow;
Where the reaper's cradle turns to gold,
And the winds untainted blow.
Going where gleams of silver shine
On the rugged mountain's crest,
And a farm awaits the master's hand—
Are you glad we are going west?"

Over the sombre dress she wore
Hot tears went rolling down,
Though she tried to wipe them off unseen,
Fearing Joe's troubled frown.
"Speak, Nelly, why do I see those tears?"
Softly she bent her head—
"Mother—the sea—and baby's grave!"
Were the only words she said.

Five years had passed, as years will go,
Dying as soon as born,
And Farmer Joe was passing rich,
In acres, flocks and corn.
And Nell? poor Nell! Joe told a friend,
In confidence, she was not well;
The friend had heard it long ago,
Had caught the echo of a knell.

All knew, save Joe, the prairie rose
Would bloom above her head;
He thought the spring would tint her cheek,
With its well-remembered red;
He could not think, (how could a man?)
That heart-aches ever kill,
Nor know how fever craved a draught
From "the spring beyond the hill."

He knew at last, one quiet hour,
When over the treeless plain
The sun shot level shafts of light
Athwart the day just slain.
Poor Nell awoke from troubled sleep,
And talked in a wandering way,
Of the little brook, of the baby's grave,
And the flowers that bloomed in May.

Of the dim, old woods, so calm and cool,
Of the sea which she loved so well;
While Joe stood holding fast her hand,
With a sorrow no words could tell.
"Oh, tiny Nelly, oh darling one,
Come back, little one, to me;
I did not know, I could not tell,"
Too late—
She had found the sea.

SALES OF IMPROVED STOCK.—We learn by the *Country Gentleman* that Mr. Joseph A. Harwood, Littleton, Mass., has sold to Mr. C. C. Pierce, East Clarendon, Vt., *Cavalier*, 6526, a fine Short-horn, eighteen months old, bred by Mr. Harwood. He was got by Matadore, 5002, out of Yellow Rose, by Mamaluke, 3114.

BEET SUGAR.

THE subject of manufacturing sugar from beets has been much discussed of late, especially in the West; and some are prophesying that we shall manufacture this indispensable article from the beet, within a few years, as they do in France, where it has become a crop of national importance. From France, the making of sugar has extended into Germany. In both countries sugar is now made which is thought by many superior to cane sugar.

The sugar producing sections in Europe are said to be increasing in fertility and wealth. The tops and the pumice, after the extraction of the juice, are used for the feeding of cattle, which thrive on them, and the manure thus produced aids greatly in the cultivation.

There seems no good reason why we in New England cannot engage in sugar making from beets, as well as our brethren in the West. To be sure we cannot expect to see fields of fifty or one hundred acres of beets, as on the prairies of Illinois or Kansas. We can raise them only on small patches of one or a few acres; but a great many such small patches are equal to a large field. We do not keep immense herds of cattle, but we keep a great many small ones; and we have learned that one cheese factory answers for a neighborhood keeping from 500 to 1000 cows. Sugar making requires machinery and capital, and may be carried on much more economically on a large scale than on a small one. It would not pay for the cultivator of a few acres to set up the necessary mills, presses and refining apparatus. A farm as extensive as a Mexican ranche, or a Southern plantation would be needed for this. But a mill and the necessary apparatus might be used for a town, or for several towns, at which the beets might be sold at a fixed price per ton, to be paid either in money or sugar.

The white beet is generally cultivated for sugar making in Europe, and with good soil and cultivation about twenty tons per acre are obtained. They are sown in drills, and carefully cultivated through the season. The beet consists of fibres, enclosing cells which contain the juice. In order to completely press out this juice, these cells must be broken or torn open. Various methods have been tried to effect this object. The method now in common use is to subject the washed and cleaned beets to the action of cylinders, surrounded by rows of saw teeth, which reduce them to a fine pulp. This pulp is subjected to hydraulic presses. In this way 75 or 80 per cent. of the juice is obtained, which then undergoes the process of evaporation and refining. Lime is added, as in the evaporation of cane juice, to neutralize the acid, which would prevent granulation.

If one hundred farmers in any section of country should engage to furnish 20 tons each to a mill, this would amount to 2000 tons, and would seem to be a sufficient basis to begin upon. The mill might be the joint property of the beet raisers, or it might belong to one or several proprietors, like the cheese factories.

Beets are said to yield from five to eight per cent. of refined sugar. A good loamy soil, free from stones and capable of deep culture is required for the successful culture of the beet. Probably it would be best to make it a part of a suitable rotation of crops.

But, sugar-making out of the question, beets ought to be more cultivated for stock than they are among us. No other root, except the flat turnip, is so easily cultivated or so little exhausting to the soil, and no other root is so little injured by keeping. They are good until the grass comes, and cattle, sheep, hogs and horses all eat them with a relish.

CHITTENDEN CO., VT., SHEARING.

The first annual show and shearing of the Chittenden county Sheep Breeders and Wool Grower's Association, took place at Shelburn, May 7 and 8. We learn from the Burlington, Vt., *Daily Times* that notwithstanding the first day was somewhat rainy and unpleasant, the display of Spanish merino ewes and lambs was very fine. L. S. Drew exhibited a dozen splendid lambs from the famous rams "Green Mountain" and "Kersager." The breed is celebrated and must prove a profitable investment to Mr. Drew. Among other exhibitors were Henry Thorp of Charlotte, H. N. Newell, Lee Tracy, E. S. Rowley and B. F. Van Vliet of Shelburn and S. H. Weston of Colchester. Mr. Tracy showed some very elegant lambs, not over six weeks old, which were bred from

"Red Leg," Col. E. S. Stowell's well-known buck.

Through the politeness of L. S. Drew, President of the association, and H. L. Newell, Secretary, our travelling agent, Mr. E. P. Wentworth, was furnished with beautiful specimens of fine wool from the sheep exhibited at this shearing, which he has forwarded to this office, where they may be seen by those interested in the improvement of our American wool. They vary from 2½ to nearly 3½ inches in length, and are fine and beautiful. We have also a sample of South American, or Mestiza, fine wool, about 2¼ inches long, from the celebrated "Altoy Flock," exhibited by Mr. H. W. Smith, of the Burlington Mill Company, who said it makes the best of cloth.

The Committee on Shearing, consisting of Geo. Barstow and Dr. Knox, made the following report:—

Classes.	Owners.	Weight of Fleece.	Days of Growth.	Weight of Carcass.
		lbs oz.		lbs.
Rams, 2 yrs. & over	Henry Thorp, .	22 5	364	123
" " "	Thorp & Newell,	21	372	105
" " "	S. H. Weston, .	17 6	385	88
Ram Tegs	L. S. Drew, . .	16 3	437	72
" "	Henry Thorp, .	9 4	387	48
" "	L. S. Drew, . .	14 12	387	70
Ewes, 2 yrs. & over	B. F. Van Vleit,	12 5	362	69
" " "	H. N. Newell, .	16 8	372	53
" " "	H. N. Newell, .	13 12	372	56
" " "	H. N. Newell, .	11 8	372	59
" " "	L. S. Drew, . .	14 15	372	62
" " "	L. S. Drew, . .	15 9	372	58
" " "	S. H. Weston, .	12 12	367	52
" " "	S. H. Weston, .	12 1	365	43
Ewe Tegs	L. S. Drew, . .	10 15	437	52
" "	L. S. Drew, . .	11 8	437	49
" "	L. S. Drew, . .	12 2	438	49
" "	B. F. VanVleit,	15 8	402	72
" "	B. F. VanVleit,	12 6	402	68
" "	B. F. VanVleit,	12 15	395	69
" "	S. H. Weston, .	12 12	367	48

The following premiums were awarded for greatest amount of wool according to time of growth; J. L. Barstow and J. M. Knox, committee:—

Ram of any Age—1st premium, Henry Thorp, 2d premium, Thorp and Newell.
Ram Lamb—1st and 2d, L. S. Drew.
Ewe of any Age—1st, H. N. Newell, 2d, L. S. Drew.
Ewe Lamb—1st and 2d, B. F. Van Vliet.

The Committee on Fleece, T. D. Chapman, Henry Giddings, E. S. Stowell, reported as follows:—

Rams, (full fleece)—best, Henry Thorp, 2d, Thorp and Newell.
Ram Tegs, (fleece)—best, Henry N. Newell, 2d, Lemuel S Drew.
Ewes, (full fleece)—best, Henry N. Newell, 2d, Lemuel S. Drew.
Ewe Tegs, (fleece)—best, Lemuel S. Drew, 2d, Henry Thorp.

On Shearing, the first, second and third premiums to A. Washburn, Milton; D. St. Peters, Charlotte, and Samuel Millham.

Among those present at the festival were Hon. John Gregory, of Northfield, President of the State Agricultural Society; Henry Hammond, of Middlebury; E. A. Smith of St. Albans, Col. Stowell of Cornwall, and other noted sheep fanciers.

CO-OPERATIVE FARMING.

A few years since Protective Union Stores were quite popular in New England. The same principle has been adopted to some extent in manufacturing, but we have no knowledge of its ever having been applied to farm management, except by such communities as the Shakers. We learn by a letter written to the New York Farmers' Club, by Mr. L. Smith, of Easton, Mass., that a "Planting Company" has been formed in that town. He says:—

We hire land and teams, buy manure, and employ faithful men to work the crops. The rent and outlays for each acre of land are divided into fifty shares at $1 or more per share. Each subscriber takes a sufficient number of shares to make up his family supplies of corn, small grain, and vegetables for one year. When the several crops have matured, the merchantable productions are divided into fifty parts and delivered to the stockholders; all straw and unsound productions are sold for cash, which are also divided. This simple method of doing business gives every one the privilege of becoming his own farmer to the amount of his investment, and the widow with her scanty income can obtain her supplies at cost. Our market is made before the crops are planted. This plan gives employment to many that would otherwise be lounging about or getting into mischief. It will tend to reduce our over stock of store-keepers and speculators, and will open the way to other co-operative movements in producing milk, butter, cheese, meat, sugar, wool, flax, and eventually all other productions that make up the wants of human life.

As "great trees from little acorns grow," who is wise enough to say that the above movement may not possibly grow into a great agricultural revolution. Machinery has already turned the farm into a shop, the agricultural college and the agricultural press is transforming it into a laboratory and a reading room, and now our good Easton friends are going to make a factory of it, with "shares" and "dividends," and "surpluses," and "stockholders" and "managers," and "operatives," but without "storekeepers or speculators."

The wisdom of making a market before their crops are planted, is certainly commendable, though it may remind some old farmers of the picture of the milkmaid, in their spelling books, who acted on a similar policy in respect to her chickens.

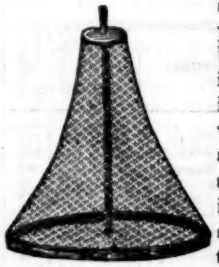
Whatever may be our opinion as to the probable success of this Planting Company—and we certainly wish it greater prosperity than we dare anticipate—we must regard it as a "straw" of no small significance. Evidently a "land breeze" is beginning to blow among the consumers of farm produce. The country population has congregated in cities and villages until every "green thing" in the land has been devoured, and bread and meat and vegetables are so dear that, to the vision of many a family, the figures in Prices Current are assuming the dim outlines of gaunt famine. Curses on "the speculators" have been tried, but they can hardly be relied upon to keep the wolf from the door. We fear the plan of our Easton friends "to hire teams, buy manure, and employ faithful men to work the crops," will prove like the hired reapers in Æsop's fable. That much, however, may be better than nothing. It admits the necessity of doing something, and this admission is the first step in the right direction. The next step is we think well indicated by the editor of the *Ohio Farmer*, whose advice to a similar community was, "off with your fashionable broadcloth, and on with a loose suit of stout and homely stuff, that will stand the weather and the wear; get you to the barnyard and to the field; lift up your voices among the oxen, and the horses, and the cows, and the sheep; talk bad grammar, and come in at night with soiled boots and hay-seed on your clothes; eat great slices of pork and baked beans; then go to bed and snore in your sleep, and wake up to thank God that you were not civilized to death in this progressive age. So you shall help to avert the impending Famine of Food."

CANKER WORMS.—About two years ago we published an account of the method by which some farmers in the eastern part of New Hampshire had saved their trees and secured good crops of apples, by destroying the canker worms after they had commenced feeding upon the foliage. After applying a belt of tar to the trunks, they commenced at the top of the tree by jarring the branches with long light poles or fishing rods. As the worms spun down on their gossamer threads, they were brushed off by side strokes with the rods. As soon as they reached the ground, they started at once and directly for the trunk and were soon fast in the tar.

We see by a statement in the Newton, Mass., *Journal*, that Marshall S. Rice of that town has been entirely successful with this process on some forty trees, by going over them twice, spending some fifteen minutes to each tree. He advises all who have neglected to prevent the ascent of the grub to try this process without fail, as he thinks the fruit of his forty trees paid well for about two days' work.

WATSON'S PLANT PROTECTOR.

The attention of those who raise tomatoes, squashes, cabbages or plants, which are liable to destruction by insects or cut worms, is directed to the invention shown in the accompanying cut, and just introduced in this market. The supply being limited, those desiring to secure a supply must order early.



HORSE-RACING AT FAIRS.

Horce-racing has been popular in Kentucky much longer than in New England; and this fact, in our opinion, entitles the following remarks by the editor of the *Farmers' Home Journal*, published at Lexington, Ky., to the especial attention of the managers of our Agricultural Fairs:—

But there is another cause, which, in the opinion of many, has detracted from the usefulness of our fairs and the interest once manifested in them by a great portion of our people, and it is—the prominence given to speed rings to the neglect of other departments—and we respectfully invite the attention of the officers of associations to this matter. Stock raising is an important interest and the breeders of blooded stock are entitled to consideration and encouragement, for they contribute materially to increase the wealth of our State and give it a reputation abroad, but the point we desire to make is this: While they have horse shows, regular races and other opportunities for developing the fine qualities of their animals, it is not doing justice to other equally important interests, to award the most of the premiums and occupy most of the time with trials of speed. Our fairs were instituted for the purpose of promoting the agri-

cultural and mechanical interests of the State, and when this leading object is kept steadily in view, and when the exhibition is varied,—comprising in its different departments, fine stock, the products of the farm, orchard, dairy and loom, and the manufactures of the different trades,—the people will attend by thousands.

For the New England Farmer.

CORN FODDER FOR SOILING.

Of all the crops grown expressly for soiling, corn fodder stands pre-eminently at the head of the list; and considering its simple and easy culture, the almost certainty of a large yield with fair treatment, the avidity with which it is eaten by all kinds of stock, and its great value as forage, its importance can hardly be over estimated.

Simple and easy as its cultivation may be regarded, there is a wide difference in the results attainable. If color is an indication of the vigor of growth, what means the pale green, sickly yellow or whitish appearance of many fields of fodder? In a field of corn such signs of weakness would not be considered very promising for maturing a good yield of ears. But allowing the growth to be vigorous, there are other differences not so apparent to the eye. The stalk and leaves of corn, like those of other kinds of grain, and the grasses are merely to support and perfect the ear. During the early stages of growth, its cellular tissue is imperfectly developed, and the juices are thin and watery. As the stalks approach full development, the juices thicken and become richer in saccharine matter, the goodness of the stalk is absorbed rapidly by the ears, which if undisturbed would take up from the stalk nearly all that is available for nutrition. The stalk, then, has its greatest value for fodder while the ear is forming. In this respect corn resembles sugar cane. The sugar maker would never expect to produce a syrup that would yield a large percentage of sugar unless the cane had attained its full growth.

Now, if we select the Southern and Western varieties, and plant thickly, and cut the stalks when only partially grown, a large quantity of tender, succulent fodder is obtained, but there is too much bulk in proportion to its goodness; too much thin, watery juice for the nutritive matter it contains. When cattle receive any addition to their pasturage, it should be in a form that combines a suitable proportion of nutriment; if a weak, bulky fodder is given them, their stomachs are unduly distended, and the labor of the digestive organs is greatly increased. Excessive distension of the stomach weakens its force, and food received in this condition is only partially digested, and is worse than wasted or lost. Some farmers are well aware of these facts, and in order to deprive corn fodder of part of its bulk, cut it up some time before using. I know of a very conscientious milkman who finding this kind of fodder increased the quantity of milk at the expense of the quality, discontinued raising it.

Now it is plain if we plant a smaller variety of corn, and give each stalk room and time to attain a full development before it is cut, we obtain a more concentrated and nutritious fodder, and what is lost in bulk is gained in quality. Sweet corn is far preferable to the common yellow. One stalk of it fully grown is worth three or four of the large Southern varieties but half matured. Being richer in saccharine juices, it produces superior milk, promotes the growth of the animals, and at the same time keeps them in excellent condition. Horses eat it greedily, and when at moderate work will thrive upon it. By planting the early varieties early in the season, following with later kinds, an abundance of this most valuable help to the pasture can be furnished four months of the year. When hard frosts approach, it should be cut up, bundled and put into good sized stooks or carried directly to the barn and stored where it will not dry too rapidly and yet not heat and mould. In this way it may be kept tender and palatable several weeks longer than usual. When the stalks become too dry and hard, they should be passed through the cutter, then moistened with water and allowed to remain two or three days; or, what is better, if the weather is cold, put them into a tight box and steam by throwing hot water on them, then covering tightly. Where a liberal supply of this is provided during autumn and early winter it will prove a material saving of hay; and pumpkins, turnips, small potatoes and other roots, which are usually fed out early, can be reserved for later use. When this fodder is desired for winter feeding mainly, it should be planted early that it may be cured during the dry, pleasant weather of September.

Although a fair yield may be obtained in a favorable season by careless and imperfect cultivation, yet high culture is absolutely essential to the best success, as the fodder is needed most just when grass, from drought or other causes fails, and only high cultivation can carry a crop through in an unpropitious season. Good land, some of the best of the farm, should be selected for it, which should be ploughed and reploughed until thoroughly pulverized. It should be highly manured, partly broadcast and partly in the drills. It should be divided into equal lots for a succession of plantings. And if those lots designed to be planted first were ploughed and manured the previous autumn, it would hasten and improve the growth of the crop. Make the drills from two-and-a-half to three feet apart, and drop the kernels about one inch apart. The smaller varieties do not require to be planted as thickly as the larger and coarser, in order to make their stalks tender. As nearly all the cultivation can be done by horse power, the expense of the crop aside from manure is

small. The labor, "the great amount of labor," has always been the chief objection against raising crops for soiling. "It is quite enough," say some, "that we are compelled to stall-feed full six months in the year without continuing it during warm weather." But our pastures, in their present condition, are totally inadequate to meet the demands upon them. The increase of the population, the greater profits when land is devoted to other crops, and even the rise in the value of wood lands, combine to circumscribe and enhance the price of pasture land, so that in many localities, if obtained at all, it cannot be had at reasonable rates. How then can our farms be well stocked and our animals kept up to a profitable standard, if not by resorting to soiling? It should be borne in mind that every day the products of the dairy fail from want of sufficient food, money is lost; and that unless the stock show decided gain through all the warm months, and go into winter quarters without having drawn upon winter supplies, the profits of the year will be small. When the deficiency can, to a great degree, be supplied by corn fodder it is surprising it does not receive more attention. Upon the small farm, with its scanty pasturage, it would be of the greatest help; while upon large farms several acres can be used to advantage. The increasing demand for hay, and the high price it brings, presents a great temptation to sell a part of that crop. This could be safely done, and its place supplied by fodder and roots. By the same means milkmen and others who buy largely of grain, could materially lessen their expenses. Where fodder is fed out in the barn and the manure carefully saved, it is one of the best means for renovating a run down farm, or keeping a good one in high condition.

This estimate of the value of this crop may seem high to those who look upon it only in the form of hard, tough and almost indigestible stover, from which the ear or grain and the weather have extracted all the goodness; or upon that made from half matured stalks of some large and coarse variety, which is hard to be cured and worth very little when cured. But, as I have attempted to show, corn fodder is just what we make it. All its nutritive qualities may be sacrificed for the benefit of the ears, or the virtue of the ears may be retained in the stalk and leaves, and the whole form a palatable and nutritious food, fully equal to all we claim for it.

This is no new theory. We act upon the same principle in the treatment of other kinds of grain. If oats are cut while in the milk, before the heads are fully developed, the whole forms a nutritious fodder, equivalent, under many circumstances, to the grain and straw fed separately. And whenever the corn is to be consumed upon the farm, I see no reason why part of the crop should not be grown expressly for fodder. The labor of husking, storing the ears, shelling and grinding would certainly be saved, and it would be better for cattle to eat a simple, nutritious fodder than to receive it in two forms as commonly practiced; one being comparatively an innutritious stover, and the other a rich meal, which has the objection of being too hearty and heating when fed in any considerable quantity. The yield per acre by this method far exceeds that planted in hills. Thus by making an economical and judicious use of fodder, corn assumes a higher value and becomes one of the most important crops that can be raised, even here in the Eastern States.

Lawrence, Mass., May, 1868. N. S. T.

EXTRACTS AND REPLIES.

IMPORTED HORSE CONSTERNATION.

Mr. Sanford Howard, a few years ago, while editor of the *Boston Cultivator*, said in one of his editorials, that "Consternation is one of the few imported thoroughbred horses that has improved our stock of road and carriage horses." This he has done by his size, (being fifteen hands and three inches high, and weighing over 1200 lbs.,) his great style and symmetry, and his remarkably fine trotting action. Mr. Randall, in his edition of Youatt, says of him, he is a compact, and for a thoroughbred, very bony horse. His dam, "Curiosity," was a large, strong mare; and his sire, "Figaro," possessed the same characteristics. Consternation's sire, "Confederate," after being withdrawn from the turf, was kept by his breeder, Earl Fitz William, to breed carriage horses from, owing to his size, bone and symmetry. The size and bone of Consternation were not, therefore, accidental, or merely individual traits; they belong to his family, and were, consequently, far more likely to be transmitted to his descendants; and experience has shown that he almost invariably transmitted these properties to his descendants. The writer of this has seen perhaps fifty colts, from one to three years old, the get of Consternation, from common dams, and those possessing different proportions of blood. Every one of them has shown good size, and quite as much bone as it is common to see in the get of the ordinary coarse stallions of the country. Consternation was beautifully symmetrical in all his proportions, with a plumpness and roundness of outline, more like a perfect hunter, or exceedingly stylish carriage horse; but without a particle of coarseness, cloddiness, or deviation from a true blood-like look. He was a horse of extraordinary mettle and activity; rapid in all his paces, singularly elastic and graceful in his movements. He could walk nearly five miles an hour, and was a beautiful and rapid trotter. With proper training he might have been made a fleet, if not a crack trotter.

Stallions of his get have been standing for several years in at least twelve different States of the Union, and his stock is gaining in public favor every year. One of the best of these was bred, and is still owned by Orin Trow, Esq., of Hardwick, Mass., who calls him "Figaro," in honor of Consternation's grandsire By reference to Randall's Edition of Youatt, in which Consternation's pedigree, which perhaps you will not wish to print in full, is minutely given, it will be seen that he comes by a more direct and shorter line of descent, from the patriarchs of the English turf, than perhaps any stallion living; being only two removes from Waxy and Haphazard; three from Sir Peter, on the side of both sire and dam—three also from

Selim and Pot-8-oes; and only four on the side of both sire and dam, (and that too, on side of dam by a double strain) from the Great English Eclipse; four also from Highflyer; and only five from the Godolphin Arabian. Consteration was imported by T. C. Albott, and di d at the stable of Chas. H Eldred, of Carrollton, Illinois, Oct., 1866.

New York, May 1, 1868. J. B. B.

REMARKS.—Another correspondent informs us that while visiting recently in Hardwick, he saw old Consternation's colt, "Figaro," and was very much pleased with his appearance. He describes him as of a rich dapple color, sixteen hands high, and weighing 1200 lbs. He also saw several of his colts, and says they are in high repute among the best judges of horses in that section, being valued at $300 to $1500 each. He speaks of one in particular, that he saw in Mr. Mixter's stable, eleven months old, fourteen hands and one inch and a half high, that weighed 800 lbs.; the best trained colt he ever saw of its age,—performing like a circus pony,—and a very picture of his sire, Figaro. He also mentions a pair of oxen that he saw at Mr. Mixter's, from the Wilmington, Vt., breed, that weighed 4070 lbs. last September. They have worked hard all winter, and are better trained than any pair of oxen he ever saw.

SINGLE EYES FROM POTATOES FOR SEED.

In the FARMER of May 6, your correspondent, H. Poor, suggests the plan of planting potatoes from eyes cut out singly, and asks for experiments from those who have tried it. About thirty-six years since, owing to the scarcity of potatoes in the locality where I then resided, I was compelled thus to experiment, or go without potatoes to eat. From less than six quarts of eyes, cut out about the size of cranberry beans, I raised over thirty-six bushels of good potatoes, and should, no doubt, have had more,—had I not seeded too heavy. They were planted on newly cleared land, without much of a burn, by upturning with a stout hoe, the earth some three inches deep and from seven to ten in diameter, throwing in from eight to twelve or more eyes to the hill, and then covered with the earth thus dug up, and what leaves, &c., I could scrape up about them. Did nothing more until harvesting. I have not planted whole potatoes of late, except occasionally by way of experiment. Would not use more than three or four eyes in a hill, even if more cost less. I prefer planting in drills. When potatoes are reasonably plenty I select my best of medium size, and cut them through and through, leaving from one to three eyes on a piece, thus planting the entire potato. Never plant from small unmatured seed. Potatoes being so scarce this season, I shall revert to my practice of 1832, and gouge out the eyes of all my good eating potatoes, which after such dissection will be used for cooking purposes. If any of my brother farmers are short of seed, let them try a few bushels. By this means we may plant our full breadth of land, and not cut ourselves short for table purposes. If you lose by it, *I shall*. My own faith, however, is larger than a grain of mustard seed. A SUBSCRIBER.

Marlboro', N. H., May 11, 1868.

PRESERVING TREES WHEN TRANSPLANTED.

Many persons leave on the entire top of a young tree after it has been removed from the nursery, when by removal it has lost a large portion of its roots, and perhaps by exposure to the winds and sun, the best of those which are left are dead and useless. Under such circumstances the balance between root and branch is completely destroyed, and if the tree lives it is almost miraculous. To maintain the proper balance between root and branch, shorten at the time of planting every limb by at least one-half of last year's growth, and when the leaf is of full size, cut out entirely such limbs as will ever interfere with the growth of the others, thereby avoiding the necessity of removing large limbs afterwards, by which the danger of destroying the tree is increased. DOWE.

Ferrisburg, Vt., May 9, 1868.

BORERS.

I am putting out a young orchard, but the borer is the great pest in this vicinity. What shall I do to keep them from my trees? Will a quart of strong ashes placed immediately about the body of a small tree after it is set damage the tree?

Marlboro', N. H., May, 1868. H. T. W.

REMARKS.—As the beetle of the apple tree borer lays its eggs, ten in a litter, in June, July, or early in August, many fruit growers wash the trunks during those months for the purpose of making the bark distasteful to the beetle and to destroy the eggs after they are laid. For this purpose some wash the trees with a lye of wood ashes or potash, but this is liable to injure the trees, if too strong. Others use a wash of two quarts of soft soap and a quarter of a pound of sulphur to a pailful of water. But, after all, "eternal vigilance" and patient industry, are the best defence we know of. As the worms hatch in the fall they eat through the bark, marking their entrance by a tiny monument of their chips, and pass the winter immediately under the bark. With the point of a knife remove the bark and strangle the little white maggot in its cradle. Examine often during the fall and succeeding spring for the "chankings," and if a borer has escaped and entered the wood, harpoon him out with a flexible wire or bit of the "cold iron" from a hoop skirt. A small quantity of ashes placed about the trunk might do some good, and probably no harm, unless piled too high, but the beetle would be likely to "steal her nest" above the ashes.

CRIPPLED PIGS.

Instances of the singular malady among young hogs, alluded to in a late number of the FARMER, occasionally occur in this neighborhood. Mr. Perley Hill bought three pigs last spring from one litter, which he kept in rather a close pen. They all did well until they weighed about sixty pounds, when two of them lost the use of their hind legs. In attempting to walk, they would take a few steps, sway to one side and their bodies would rest behind upon the ground, the front being supported by the fore legs. They were removed from the pen, and put in a shed where the horse manure was thrown and kept several weeks, but did not improve in strength, though they gained somewhat in weight. But at the annual butchering the first part of winter they were killed, and two dressed less than 100 lbs. each. No unusual appearances could be seen about the meat. The third one did well, and has now a litter of pigs. Another pig from the same litter was similarly affected.

Now, what was the cause? Not high keeping, for Mr. Hill makes cheese from his thirty cows, and feeds his pigs clear whey and no corn. Breed-

ing in and in was probably not the cause, as the parents were only distantly related.

I had a pig last summer that was similarly paralyzed, but in a less degree. I let it into the barnyard a few weeks where there was plenty of weeds. It would graze with its hind quarters resting on the ground, and moved about with difficulty, but fattened well. Some said I ought to rub the issues in the hind legs with a cob; but I think there was no trouble with the issues. Z. E. J.

Irasburg, Vt., May 5, 1868.

REMARKS. — Mr. H. C. Meriam, of Lowell, Mass., informs us that he has had shotes similarly affected. He withholds their feed till they have a good appetite, and then mixes with a pailful of swill, say, a teacupful of powdered charcoal, the same quantity of wood ashes, and two or three great spoonfuls of sulphur, which generally brings them out all right, in a short time. He also throws ashes and coal into the pens, for them to eat as they please.

POULTRY ACCOUNT.

I have seen many accounts in the FARMER by different individuals to show their *luck* in poultry raising, and have always read them with much interest. Last fall, I thought that I would see if what I have often heard, that hens never paid their keeping in winter, was true. As I was not at home all of the time I did not begin until the 24th of December. The hens are of mixed breeds and not very large. Below is an exact account of the cost of keeping, &c.

1867.	DR.	
Dec. 24th, to 7 hens, at 50 cts. each	$3 50	
Dec. 24th, to 6 late pullets, at 30 cts. each	1 80	
Dec. 24th, to 1 late rooster	40	
April 24th, to cost of keeping 4 mos	6 96	
April 7th, to 13 eggs for setting	27	
April 21st, to 3 hens at 50 cts. each	1 50	
Total		$14 43
1868.	CR.	
Jan. 24th, by 69 eggs laid month ending Jan. 24, at 3 cts. apiece	$2 07	
Feb. 24th, by 77 eggs laid month ending Feb. 24, at 2½ cts. apiece	1 93	
Mch. 24th, by 152 eggs laid month ending Mch. 24, at various prices	3 28	
April 24th, by 223 eggs laid month ending April 24, at 2¼ cts apiece	4 65	
April 24th, by 16 hens at 50 cts. each	8 00	
April 24th, 1 rooster	50	
Total		$20 43
Net profit, 4 mos		$6 00

The food that they have had was barley and corn, with an occasional dish of shorts, &c. I shall continue to keep my account, and may perhaps send in another report. J.

Winchendon, Mass., April 25, 1868.

CURE FOR SORE TEATS ON COWS.

Take one-third salt grease, two-thirds mutton tallow, with what sugar will dissolve; melt them over the fire, stirring thoroughly to mix. When cool it is ready for use. I have cured in two days where the cracks were so bad that it was almost impossible to milk. A SUBSCRIBER.

Strafford Springs, Vt., April 17, 1868.

GREEN WORMS ON ROSE BUSHES.

Will you or some one of your readers inform me through your paper, of anything that will kill the small green worms that have covered the rosebushes for two or three years past? My later varieties were nearly killed, looking as if a fire had run over them. They did not begin early enough, on mine, to destroy the buds of the early kinds. I have tried ashes, soot, gas-water, &c., but it will not kill them. A LADY.

Auburn, N. H., 1868.

REMARKS.—Try sulphur sprinkled on freely while the dew is on, or syringe with a weak solution of soft soap.

WORMS IN WALL PAPER.

In reply to an inquiry similar to that of our correspondent "R.," of Somerset, Mass., in the FARMER of April 25, an experienced paperer informs the editor of the *Utica Herald* that turpentine min gled in the paste at the time of papering, is a sure remedy against the depredations of all insects. Of course, in the cases alluded to by our correspondent, this would necessitate repapering the rooms. A mixture of pepper is also recommended by another correspondent in the department of "Household Economy."

CAN I KILL THE CREEPER?

Is there any known way to prevent the spreading of the roots of the "creeper?" I notice them running all over many gardens. I think them a great pest. D. H. S.

New Haven, Vt., Nov. 25, 1867.

REMARKS.—Yes. Cut off his head whenever he comes in sight. Persist in this one season, and you will be likely to exterminate him. He cannot live long without leaves and branches. Thank you for your good opinion of the FARMER. Try to make a thousand or two other people believe just as you do.

WHITE MAPLE SUGAR.

I have heard that sugar can be made from the common white maple. Will some experienced sugar-maker inform me whether it can be profitably done? J. T. LANDMAN.

South Londonderry, Vt., May, 1868.

REMOVING WILD BEES.

A correspondent inquires through the FARMER as to the best time to remove wild bees from a tree to a hive. If he desires to transfer the bees and comb to a movable comb hive, now is the best time to do it; but if he wants to put them into a box hive without the comb, about the first of June will be the right time. H. ALLEY.

Wenham, Mass., April 27, 1868.

FOOD FOR A SITTING HEN.

Will you or some of your subscribers inform me what is the best food for a sitting hen? I raised sixty fowls last year, whose average weight was six pounds each. FELIX.

Middlebury, Vt., 1868.

REMARKS.—We think you have been very successful, and can tell us how to feed them better than we can tell you. We feed with Indian meal made into dough. Scalded meal is probably best, given quite moist. The sitting hen does not need meat or lime.

—Fruit trees are more truly ornamental than the most fanciful shrubs.

SILVER-SPANGLED POLAND.

These fowls, says Mr. Bement, are in all respects similar to the Golden-Spangled in shape and markings, except that white, black and gray are exchanged for ochre or yellow, and various shades of brown. He says they may certainly be ranked among the very choicest and most beautiful of fowls. They lay medium sized white eggs, much pointed at one end, in tolerable abundance, and when they sit, they acquit themselves respectably.

The newly-hatched chickens are very pretty, creamy-white, interspersed with slaty dun on the back, head and neck, marked with longitudinal stripes down the back, with black eyes, light lead-colored legs, and a swelling of down on the head, indicative of the future top-knot, which is exactly the color of an old-fashioned powdered wig; and, indeed, gives the chick the appearance of wearing one. The Polish fowls are better suited for limited enclosures and for keeping in a small way than for being reared in large numbers.

FRUIT GARDEN.

We think we have the best soil and climate for fruit culture in the world, yet probably get less returns for the money invested than any people on earth, simply because we do not fully appreciate *labor* as an essential element of success. The amount of practical skill and incessant care given to fruit culture in Europe before the innumerable fruit enemies are overcome, would astonish Americans. The writer of this has spent, every year, *months* of time when a boy, in simply training plums, apricots, cherries, pears, and peaches to walls built for their protection; in capturing moths, wasps and insects, during summer; in keeping birds from the buds; in pinching back and directing the course of summer shoots, and, in innumerable ways, watching the progress and maturity of fruits which would have "come to nothing" but for such care. It is curious to read the learned essays in the "secular" papers about the decline of fruit growing. "Elements are exhausted," "systems are wrong," "varieties run out," and so on. "The soil and climate once grew fruit well here, but it will do so no more." The truth is, in new localities insects and fungi, inimical to fruit, do not exist; cannot until their natural food first comes. After a few years they find out your orchards; and to succeed after that you must *fight them*. Insects and blights reproduce themselves, and we must gather them together and destroy them before they transcend their adolescent state. This is the only remedy. Washes, oils, preparations, &c., do much good; but much more may be done by *manual labor* than is generally supposed.

We may say, then, look sharp after insects. Last year we introduced petroleum as an insect destroyer. It is the most valuable discovery of modern times to the fruit-grower. In over-doses it is, like tobacco, sulphur and others, fatal to the life of the trees. We have

found that just enough to make a barely purple tinge on the water used for syringing is effectual in destroying most insects. If one dose does not do, try another the next day. Better use a light dose twice, than one heavy one, which kills plants and insects both.—*Gardener's Monthly.*

For the New England Farmer.

SPECIALTIES IN FARMING.

It is usual for agricultural writers to urge the importance to farmers of cultivating a variety of crops, and raising a variety of domestic animals, so that if one kind fails or does poorly, some other may yield so good returns as to compensate for this partial failure.

Doubtless such advice in the main is good; but, it seems to me, that specialties in farming are no less important than in other departments of industry. I mean by this, that if a farmer lives in a favorable section for orcharding, for instance, and has a taste for it, he should devote his attention, especially, to the raising of fruit, and show to all around him what is possible to be done in this direction by one who understands his business. Not that he should neglect to raise other crops; but while he does other things as well or even better than the majority, let no one look upon his farm without receiving the impression, *most forcibly*, that in the department of *orcharding*, he has few equals.

In like manner, if one chooses dairying as his favorite branch of agriculture, let it be his determination to so fully understand his business that he shall be able to produce the choicest article, and sell it at the largest profit, so that his neighbors shall be stimulated to try and do likewise.

Men, who thus devote their energies to the attainment of superior excellence in any one branch of agriculture, occupy the exalted position of teachers of their specialty. And not a few such men to-day have a world-wide reputation and influence. Who, for example, interested in fine wool raising, is not familiar with such names as Hammond, Sanford, Stowell, Wright, Rich, Randall, Atwood, Campbell, and a score of others, scarcely less noted as successful sheep breeders? Who can measure the influence of such men in raising the standard of excellence? No live Yankee will know it to be a fact that any of these leaders have produced upwards of eight pounds of *cleansed* wool from one sheep in a single year, and remain satisfied with a two-pound fleece. There will be a general strife, in sections where the Merino is kept, to approach as nearly as possible these high standards.

In this way are the leaders in any department of agriculture great public benefactors. What we need is more such men. In every community where any particular branch of agriculture rightfully takes the lead, there should be some bold leaders, capable of teaching the masses the possibilities of attainment in that department.

And there is every inducement for one to strive to be a leader and teacher in the special business of his choice. In no way can he hope to do so much good, or secure so good pay for his services. Look at the fortunes made by some of the above named gentlemen as the result of their efforts to produce the best. The best always commands a high price. Whether it be the best horse or hen, the best cow or sheep,—he who has it, and can prove his claim, has a fortune, and deserves one.

We hear much said about "*fancy*" animals and "*fancy*" prices, as applied to the choice ones of their class and the prices they command. The term is applied in reproach, and often very unjustly. Such animals are indeed "fancy" so far as suiting the fancy or taste of every sensible man. But they are *not* "fancy" in the sense of unreal, for they are most real —the genuine substance,—while the ordinary animals of the class are only the shadow of of what they should be.

Turning again to the sheep, for an illustration, who will call the one that shears eight pounds of *cleansed* wool a "*fancy*" sheep, and one shearing but two pounds a practical one,—a reality, a substance? And, as to price, while the inferior one is dear at *no* cost, the superior one is cheap at *any* cost; for, while the former is capable of making a rich man poor, the latter, if the product of his own genius, cannot fail to make a poor man rich.

But I cannot, within proper limits, develop this subject as I had intended when I commenced. I wished to dwell upon the common folly of attempting to raise a crop for which the climate and soil are entirely unsuited. How often this is done because the farmer makes it a principle not to buy anything he can raise. He raises his own wheat though it costs him twice as much as it would to buy the same. Such a course may be wise, but I fail to see it. A. B. PALMER.

Orfordville, N. H., April 7, 1868.

VARIED AGRICULTURAL INDUSTRY.

The following remarks from the report of Mr. Newton, the late Agricultural Commissioner, indicate a wise appreciation of the principles of political economy, so far as they relate to labor and especially to agricultural labor.

"Excessive increase of a single product tending to over supply and a reduction of price, and attended with heavy expenses for outward freights, and the purchase of all farm and family supplies, burdened with costs of carriage and a long line of consuming commissions, points unerringly the way to national poverty, and individual bankruptcy. A proper equilibrium of the products of in-

dustry, saving untold burdens of freightage, excessive profits and extortions of middlemen, insurance, breakage and manifold losses prevents reduction of prices from burdened markets, lightens damages from failures of single products, gives employment to all classes, conditions and capacities of labor, insures remunerating wages for workmen, renders possible necessary rotations, and the production of farm manures, and increases the wealth and intelligence of a State. The smaller products of a diversified industry are far more than an equivalent for a single result of organized labor, however absorbing or important. The cotton crop for example of Georgia in 1860 was 701,840 bales, yielding little more than $30,000,000, while the butter of New York in 1865, one of several products of the dairy, was estimated at $60,000,000, and yet the census gives to New York 370,914 farmers and farm laborers, and to Georgia 316,478; including white farmers and farm laborers and only the male slaves. Besides the other dairy products, milk, cream and cheese, and the multitude of smaller products of the farm, the principal crops make astounding aggregate—as in 1864, when the corn crop of New York was estimated at $38,000.000, the wheat at $25,000,000 the oats at $33,000,000, potatoes at $19,000,000 and hay at $90,000,000, including the minor cereals, products of gardens and orchards, the production of beef and mutton from pasturage, and a great variety of miscellaneous and exceptional products, the currency value of the agricultural productions of this one State in that year was far greater than the money returns of any cotton crop ever produced in the country."

BUTTER OR CHEESE?

In central New York there appears to have been for the last ten years such a mania in behalf of converting milk into cheese instead of butter that the latter has become quite ignored and high in price. The papers in that section have been filled with accounts of the different cheese factories and the prevailing prices from week to week. We have for some time been well assured in our own minds that the business was being run into the ground—that is, overdone—and so it proves to be. Cheese manufacturers and dairymen who supply the milk are both complaining that the ruling prices of cheese are getting to be too low, affording so little profit to the business as not to make it an object of sufficient importance to many of them engaged in it.

Thus, while butter is yearly commanding higher prices and milk and cream have advanced, affording good profits, cheese is falling, and we may add will continue to do so until butter-making and cheese-making occupy a compensating attitude toward each other. It is so whenever farmers or persons in an other line of business throw all their capital and energies into specialties.

If farmers will all rush into butter-making, butter will fall from an over-supply. So with cheese or with potatoes or grain of any kind. It has been so with wool-raising. When the rebellion broke out there was a great demand for woolen goods, prices for the raw material rose enormously, and the farmers of the West and East rushed into wool-growing, and the result is just the same. It will be so with the grape and wine business after a while. If a large number of city merchants, owing to the high price of coffee, tea, or any particular fabric, should make large importations and overstock the market, there would be but one result,—effect following cause.

This being so, we think that the suggestions which we have often made to the general farmer to follow a system of *mixed husbandry* is the best in the long run, the profits being far more certain and the risk a great deal less. —*Germantown Telegraph.*

HEIFERS CALVING IN JUNE.—A writer in the *Practical Farmer*, in speaking of the value of heifers that drop their first calves in June, says:

"A heifer having her first calf in the month of June, or when pasture is best, will make a far better milker than one that calves in the fall or winter. Such has been my experience, and yet in all the articles which I have read on the breeding of dairy stock, I have never seen it stated as the *sine qua non* of a first rate cow. But so well am I convinced of its importance, that I would give twice as much for a heifer of the same stock and age to calve in June, as for one that would calve in winter. The grass being then in the best condition to produce a full flow of milk, all the parts that tend to the secretion of milk are developed to their utmost capacity. The udder, the teats, the milk veins, become enlarged permanently —and the best cows I ever raised we had to commence milking several weeks before they calved, for fear of garget, as they would appear to be in pain from the fulness of their udders."

QUINCES.—A few years ago, this fruit was easily grown and large quantities found their way into the great cities, where they were sold at moderate prices; but latterly they have failed, and, like the apple, have ben scarce and high. The quince seems to flourish best on a rather stiff, moist soil, in somewhat sheltered locations. We have often seen trees or bushes loaded with fruit, growing beside brooks or around small ponds. It has long been a favorite fruit for preserving in sugar, and for marmalade, on account of its texture and peculiar and agreeable flavor. We know of no reason why the cultivation of this fruit

should be neglected; for there is always ready sale for it. The plants are easily grown from cuttings, and soon come into a bearing state. They may be planted six feet apart in the row, with rows ten feet apart. The trees are quite long-lived, and usually healthy and hardy. The worst enemy to the quince is the borer, which soon destroys the tree if allowed to work. The same plan may be adopted for the destruction of the borers in the quince as in the apple. Fruit-growers having a soil suitable for this fruit should certainly devote time and space to its cultivation; for, at the prices for which it has been selling, no fruit will pay a better profit.—*Am. Jour. Horticulture.*

PLOUGHING ORCHARDS.

I have a young orchard that I set out eleven years ago and cultivated it nine years and then laid it down to clover. This spring I ploughed it and found that the roots of the trees had literally filled the ground, so that by ploughing only about four inches deep, I ploughed off the roots by thousands, which I think must be a great injury to the trees. Now what am I to do? The fruit books and agricultural papers recommend cultivating orchards as a corn or potato field, but I am confident that it will ruin mine if I continue to plough the land. E. L.

Long Plain, Mass., May 13, 1868.

REMARKS.—The apparent superabundance of self-sustaining and re-producing power in both vegetables and animals is one of the most wonderful provisions in nature. Compared with the multitude of blossoms which fruit trees put forth every spring, how small is the crop that matures! Prof. Owen estimates the possible increase of a single aphis, or plant louse, in the ten generations of which it is capable during a single season, at the incomprehensible number of 1,000,000,000,000,000,000! In fact, naturalists tell us that "all organic beings, without exception, tend to increase at so high a ratio, that no district, no station, not even the whole surface of the land or the whole ocean would hold the progeny of a single pair after a certain number of generations." The productive power of a single thistle, mullein, or turnip is equally wonderful. Do not the roots of trees possess something of this exuberance of life? We trim their branches not only without injury, but with the most beneficial effects; may not the roots be "purged" without more fatal results? That too much may be removed from either top or root no one can doubt; but if all the roots of "E. L.'s" trees could be exposed to view perhaps he would see that the "thousands" which were broken by his four-inch furrow would bear but a small proportion to the whole; possibly no larger than that of an ordinary trimming to the whole amount of the branches. The question of the expediency of ploughing orchards is one on which men differ. They differ also as to manuring, trimming, &c. Trees in grass on our old farms seldom bear well. Top-dressing is advised by some. Others think we ought to take a hint from nature's process in the woods, and mulch our trees. Others still keep them under cultivation,—some using a plough, others the cultivator or harrow.

One of the most successful orchardists in New England, Capt. Geo. Pierce, of Arlington, Mass., near Boston, in reply to a question as to the secret of his success, said, "I prepare and *till my ground well*, keep off and destroy caterpillars, canker-worms, web-worms, prune my trees myself, &c.; in brief, I comply with all the conditions, so far as I know them, of a good apple crop, and I get one annually, while my neighbors, failing to do so, have become discouraged, and are, and have been, cutting down their trees." He uses coarse wild meadow hay for mulch under his trees, and raises squashes between the rows.

Ploughing or not ploughing is only one of the conditions of a good apple crop; and the good or bad effects of this operation depends on so many circumstances of soil and of subsequent and previous management, that we do not suppose that any one rule can be adopted for general practice. Suppose one orchard to be founded on a rock or some impervious subsoil, but a few inches below the surface; and another to be planted in deep mellow earth, like the western "openings," where a plough may be put in "to the beam" clear up to the trunk or stump of the scattering oaks. Now in ploughing these two orchards might not the effect be very different? In one case, an ordinary furrow might sever nearly every root, in the other case but few might be disturbed.

No one with "half an eye" for fruit trees can travel through the country without noticing the great difference between the appearance and fruitfulness of cultivated and uncultivated orchards. Indeed we have been forced to the conclusion that it is useless to set an orchard in grass land on the old farms of New England. The idea of the spontaneous production of apples must be abandoned. If we would raise fruit we must work for it,

as we work for a crop of corn or a crop of vegetables. Not that a tree should be cultivated just as we cultivate a hill of corn or a bed of beets, but the peculiarities of each must be considered and its wants supplied.

If our correspondent will plant corn, potatoes, squashes, or other hoed crops, with manure enough to secure a fair yield, we shall expect his trees will show by both fruit and foliage that they are not "ruined."

MORTALITY AMONG SHEEP.

A few weeks ago we alluded to the fact that many sheep and lambs had died this spring in Vermont from some "unknown disease." Dr. Henry Boynton of Woodstock, Vt., publishes an article upon the subject in the last *Mirror and Farmer*. He says that during the months of March and April the loss in some cases was as great as ten per cent., and in some of the best flocks as many have died this spring as are usually lost in ten to twenty-five years. The doctor says:—

"We believe the malady is confined mostly to yearling bucks, though there are cases of all ages and both sexes.

The most unaccountable feature about the disease is, that it seems quite as likely to attack animals that are apparently sound and in first-rate condition, as those that are poor and feeble. Two or three in our own flock, that have been cared for as well as sheep can be, have died within twenty-four hours after the first symptoms of derangement have been noticed. One yearling buck, which at night looked as though he was able to fight his way with any animal of equal pounds that could be produced, in the morning was dead. Several cases in our neighbors' flocks have occurred of a similar nature, death sudden and unaccountable, without any premonition or warning. But more generally the animal refuses his food, or seems too much exhausted to walk across the pen to get it. If noticed at this time, it may be coaxed to take a little food, but will soon go away by itself and lie down. It shows a disclination to move, or only mopes about the pen, hanging its head in a careless, sleepy manner.

The eyes become dull and heavy, giving out a glutinous secretion. The discharge from the nose becomes quite profuse, and forms a hard, gummy rim around the nostril. The breathing is rapid and labored, especially if the animal is made to move around, and the heart will beat from one hundred and thirty to one hundred and sixty times a minute. A careful look will show that the nose and lips have become blanched and bloodless, and are literally as white as snow. The inner side of the lips, the gums, the tongue, and in fact the whole inside of the mouth, will be found to have taken on the same ashy paleness. An examination of the skin of any part of the body will show the same blanched condition."

Various experiments were made by Dr. Boynton to see if any blood could be found near the surface of the body—such as slitting the ears, lancing deeply various parts of the body, "but not the slightest trace of blood could be found." Next, taking an animal that he was sure must die, and placing it in a favorable position he opened the arteries in the neck. The result was the escape of about four ounces of watery blood—it could not be called bloody water.

The *post-mortem* appearance of these cases is such as might be anticipated from the above facts. In cutting open a carcass, not blood enough is found to stain a knife-blade. Every organ in the body, brain, lungs, heart, liver, and kidneys is perfectly sound. The same is true of all the membranes. The mucuous membrane lining the nasal passages is free from any sign of irritation, and the tissue of lungs, liver, heart and kidneys is firm and sound.

No coagulum (clotted blood) is found in the heart or large arteries. A little half-coagulated blood is found in the large veins. All the watery blood that can be found by opening the heart and large arteries of an animal not ten minutes dead will not exceed four ounces. The lungs and heart, as well as the liver look exactly as though they had lain in a pail of cold water for twelve hours. In fine, the entire appearance of the whole carcass is just what it would be if the animal had been most carefully and thoroughly bled.

Here, then, is the pathology of the disease,—the blood turns to water and passes off, and the animal dies precisely as it would if gradually bled.

Now for the cause. That, we confess is beyond us. We hope some one more skilled in observing diseases of animals than ourself will give us a clue to this.

At this writing we have six yearling bucks with marked symptoms of this bloodless condition, and we are treating them with the muriated tincture of iron. The results we will give hereafter.

MASSACHUSETTS AG'L COLLEGE.

Beside the appropriation which we noticed recently of $35,000 for the erection of a dormitory building, by the trustees of the Massachusetts Agricultural College, at their meeting in Boston, May 11th, votes were passed appropriating a sum not exceeding $7000 for the erection of a boarding house, north of the building now used for that purpose; one thousand dollars for the purpose of grading and putting the grounds in order in the vicinity of the Botanical Museum and Plant Houses; and two thousand dollars for moving and fitting up the old barns on the place, with a cellar under one of them.

The salaries of Dr. C. A. Gessman, Professor of Chemistry, and of S. F. Miller, Professor of Mathematics and Physics are fixed at $2000 and house rent; term of service to commence with the academic year in September. Dr. Gessman is now connected with the salt works at Syracuse, and is spoken of as an accomplished chemist. Dr. Miller of Chicago, is a

practical surveyor and engineer as well as a scientific man.

The new dormitory is to be ninety-six by fifty feet, about the same size as the present one, but with greater architectural beauty. The old barns and tobacco sheds are to be removed near to the north line of the farm, and will be used for the stowage of crops until the more permanent buildings can be provided.

OBSTRUCTION IN A DRAIN TILE.

Our readers who are interested in the subject of drain tile will remember a statement by Mr. M. Pratt, of Concord, Mass., of a "slimy fungus mass" that he found in large quantities in some of his pipe, which he feared would eventually stop the flow of water. No allusion to accumulations of this kind could be found in any work on drainage at hand. A correspondent of *The Circular* describes a case in which a drain was effectually choked by such obstruction, although for a time it operated in a most satisfactory manner. But this spring while "crossing the field full of enthusiasm for commencing business on the rapidly drying soil," he was "utterly shocked at seeing the water rising in holes right over the main drain." He then went to work to find where and what was the cause of the overflow, of which he gives the following account:—

In the first hole that I made the water burst up. With the second, that I dug further down, I had the same luck. In the third hole, still further down, there was less water, and I succeeded in taking out a tile, when, to my utter dismay, I found it nearly full of a slimy, jelly-like mass of stuff, and there was every indication that a considerable length of tile was filled with it.

I then fell into a brown study, endeavoring to find the cause of this uncanny phenomenon. I soon discovered it. Two drains from the barn cellar terminated in this tile-drain; and although the dark liquid that flowed in them contained no solid material, it favored the growth of this fungoid jelly. I have observed the same vegetation growing on the stones of the open ditch where sink-water and sometimes soap-suds flows.

FATTENING SHEEP IN ENGLAND.

We recently copied from the *Country Gentleman* a statement by an English correspondent that yearling sheep were sold at $12 to $14.50 per head at his market for mutton, and that a cross of the Down with the Lincoln, Leicester or Cotswold was preferred for this purpose. From a subsequent communication we copy the following account of the management and mode of feeding which is there practiced to fit them for the market, and for the high prices they command. It will be remembered that English farmers use the word "corn" to express what we mean by the word "grain."

My plan is to let the lambs run through a hurdle away from their dams as early as possible; supply them with a few cabbages or turnip tops; at the same time let them have low troughs, in which we always keep fresh broad bran, and, if possible, a little sweet leafy clover hay, cut into chaff, and mixed with the bran. They will begin to eat this when very young, and it will then induce them to eat a few beans or peas, ground and mixed with the bran; but I do not find they care much for the corn until they get several weeks old. I have begun to give some of my oldest lambs a few beans, the last day or two, but they do not care to eat them, and I think the bran and chaff is quite as good for them. I like them to have the most corn when they begin to eat a large quantity of *young green food* or *mangel wurzel*, and I generally begin to reduce the corn when on good sound fresh green feed, which they usually are on before they are weaned. After they are weaned, I give them a little more for the first week or two, unless they are on very good feed, such as cinque-foil, or a variety of seeds; I like, if possible, to keep some mangel wurzel for them after they are weaned.

I very rarely give my ewes any corn, either before or after lambing, (except a few old broken-mouthed crone ewes,) but if very short of turnips, I sometimes give the ewes with twins a few oats, especially if I have not much hay or chaff, and when oats are cheap, which they certainly are not now.

I generally take off all the corn from my ewe lambs a short time after they are weaned, but continue it with the ram lambs, and some or all the wethers; after the rams and wethers begin rape or turnips in the autumn, I begin to increase their corn and dry food, until they have a pint of corn and cake each per day, which I think is not too much, especially as they are kept on the turnip land all the winter, and some of my land is heavy, bad feeding ground.

I always try to avoid letting any of my sheep or lambs have any sudden change of food; and I have no doubt a variety of food is best when it can be obtained, and, in summer, with good water to go to as they like.

SALT IN COMPOST.—I once tried an experiment in planting corn. I had long been using barn manure, ashes and plaster, mixed in equal quantities, in the hill. I read somewhere that salt was a good fertilizer to add to the compost. I thought I would try part of a field. To twenty bushels of compost I added 1¼ bushels of cattle salt, well mixed in. The result was, as far as I used the salt mixture, the seed all failed to germinate. I planted it over; the same result followed. I planted the third time by the side of the hill, so that the corn did not come in contact with the manure, and it all came up this last time first-rate, —the seed each time being from the same corn. In the instance of the planting where the same manure was used without salt, corn came up first best. My advice is to use no salt in the hill for corn. But a small quantity, mixed with

plaster, is a good top-dressing for corn, and will prevent in a measure the destroying effects of the cutworm.—*Cor. Co. Gent.*

THE CULTURE OF DWARF PEARS.

In addition to trenching and underdraining, one or both, mulching will be required. This moderates the effects of climate, rendering the soil cooler and moister in summer, and warmer in winter and at the same time keeps down the weeds.

In the spring transfer the surplus mulching from the strawberry beds to the pear orchard. In the fall spread manure on the surface. The rains and frosts will carry its solvent parts to the roots. Common barn yard manure does very well, but ashes, lime, fish brine, urine, soap suds and any waste do better, I think. According to my observation, barn-yard manure produces wood growth and foliage, while lime, ashes and the manurial salts, I have mentioned, tend to harden the wood and make fruit buds.

PRUNING. When planting out, cut back the top so as to establish an equilibrium between the roots and branches. During the growth, prune for symmetry, and when limbs interlace and rub; but so long as the tree is healthy avoid the use of the knife and shears. Remember that bleeding, blistering, vomiting and purging have gone out of use in the treatment of diseases in man and animals, so also the old barbaric style of cutting and slashing is going into disuse among intelligent fruit growers.—*Country Gentleman.*

HEAVY SHEEP.—Mr. John Snell of Edmonton, Canada, furnishes the *Country Gentleman* with the following result of weighing some of his sheep. He thinks the weights of his yearling rams the highest that have ever been reached in Canada at this season:—

Six yearling rams, Cotswold and Leicester, averaged 276 lbs.—the lightest being 251 lbs., the heaviest 285 lbs., or an aggregate of 1656 lbs. Six two-year-old sheep averaged 341 lbs., the lightest being 314 lbs, and the heaviest 368 lbs.—total for the six, 2040 lbs. I sheared from a yearling Leicester ram 20 lbs. of wool, from a yearling Cotswold ram 22 lbs., and from a two-year-old Cotswold ram 21 lbs.

—Mr. J. Harris says, in the *American Agriculturist*, that "clover is unquestionably the great renovating crop of American agriculture. A crop of clover, equal to two tons of hay when ploughed under, will furnish more ammonia to the soil than twenty loads of straw-made manure, drawn out fresh and wet in the spring, or than twelve tons of our ordinary barn-yard manure." He, however, thinks it nearly as well to make the clover into hay, feed it out, and carefully save the manure,—that is, there will be little loss in the value of the fertilizer, and may be profit from the feeding.

AGRICULTURAL ITEMS.

—If a redbreast comes into your garden, does he come there a robin?

—Excellent sugar, it is said, can be made from the sap of the white birch.

—The best strawberry plants are said to come from the third and fourth set of runners. The first and second are to be cut off.

—This spring, a cherry tree near Boston, blossomed May 11. In 1775, the same tree blossmed April 19.

—In relation to the destruction of caterpillars and other insects, don't forget the old adage, "a stitch in time saves nine."

—It is said that valerian or nervine, if planted near infested vines, attracts insects so that they may easily be destroyed.

—The *Rural World* recommends giving stock, especially those confined to stables, a sod of earth a foot square once a week, or what they will eat up clean.

—It is the province of agricultural papers to repeat knowledge, rather than to give new. People forget, and must be reminded. New facts, worth recording, are few and far between.

—The *Ohio Farmer* says that within the last ninety days, one auctioneer in Mahoning county had sold at various times 239 cows at an average price of $59.38 per head.

—The amount of wool imported from July 1, 1867, to November 1, was 9,410,926 pounds. Value, $1,478,953. Within the same time woolens were imported to the value of $17,185,305.

—It is one of the singular facts that does not often occur, that potatoes are worth more than corn, cabbages are worth more than wheat, and a barrel of onions will purchase a barrel of flour.

—The *Gardener's Monthly* recommends enriching the soil for cabbages, by making a hole with a dibble for the plant, fill the holes with manure water, and after it has soaked away into the earth set the plants as usual.

—The editor of a French agricultural paper suggests that the school boys should be sent out in the fields twice a week, to hunt after the insects injurious to the crops. It is estimated that 600 schools, attended by 30,000 pupils, can destroy 6,000,000 insects every fortnight.

—An experienced horticulturist recommends that iron shavings, scrap-iron, and the scales and dust from blacksmiths' shops, be dug in around pear trees, and also that the bodies be repeatedly washed with a solution of sulphate of iron for the purpose of destroying fungi.

—In an article cautioning farmers not to plough land when wet, a correspondent of the *Western Rural* says he once planted corn on a field a part of which was ploughed before and a part immediately after a rain. "As soon as the corn was up,

we could see the place, to a row, where the wet and dry work was done. The corn on the wet land was yellow, did not grow as fast as the rest, and at harvest time, the workmen (though not aware of the reason,) noticed the difference as soon as they came to it—that which was worked wet yielding one-third less.

—Ohio has not as yet located the agricultural college, for the endowment of which the Congressional grant of 630,000 acres of land was accepted by her legislature. Several sections are about to present proposals for its location.

—For chapped hands and for the removal of pitch or the grim of hard work, and to keep them clean and soft, Mr. J. Weston says, in the *Mirror and Farmer*, that he has never found anything equal to raw linseed oil, a bottle of which he always keeps near his sink.

—A field badly infested by wire worms was summer fallowed one season by Judge Owen, of Herkimer, N. Y., ploughing it three times, and the worms were effectually starved out. Alderman Mechi, of England, finds six bushels of salt per acre a sure cure.

—If a farmer in Wisconsin plants a row of trees along the road, he is exempt from working on the road; whoever hurts one of these little ones is fined $5; and the State Horticultural Society offers a premium of $100 for the best ten acres of forest trees, and $50 for the second best.

—A hen has the capacity of laying six hundred eggs—and no more. Usually they lay a few the first year; from three hundred and twenty to three hundred and seventy in the next three years; and the rest from the fifth to the ninth year inclusive. The true economy, therefore, it will be seen, is not to keep hens after their fourth year.

—A correspondent of the *Rural New Yorker* says, a neighbor of his saved a fine litter of pigs from a ravenous sow by the following plan. He took the pigs away and gave the mother a pint of whiskey, which made her drunk, and while in that condition he carefully replaced the pigs, and she was afterwards as good a mother as was necessary. Queer remedy.

—H. A. Sheldon, of Middlebury, Vt., informs the New York Farmers' Club that he succeeded in raising a large crop of plums last year, by applying to his trees, with a small hand forcing pump, water that had stood in an emptied gas-tar barrel "until it was dark colored as coffee, and pungent as creosote." He repeated it once in three days, but did not find a plum stung after the first application.

—To those who have worn down their teeth masticating tough beef, the *Western Rural* says that carbonate of soda will be found a remedy for the evil. Cut the steaks the day before using into slices about two inches thick. Rub over them a small quantity of soda. Wash the next morning and cut into suitable thickness, and cook to taste. The same process will answer for fowls, legs of mutton, &c.

—If everybody should farm right, and raise large crops, we should hardly find a market for them. But there is no danger. Our productions do not keep pace with our population. Farming is not popular. And those who stick to the land, and bend all their energies to increase its productiveness, have every prospect of abundant success. Good farming will pay.

—The New York commission to investigate the causes of abortion among the dairy cows, visited 1,577 farms and received in all 4,259 reports, from ten States, expending $6,417.27, and yet, with the best attainable talent, and all this information, the cause was not ascertained. This may be worth thinking about by those who expect an editor to know exactly the cause and reasons for anything unusual or injurious.

EXTRACTS AND REPLIES.

HORSE FOR GENERAL UTILITY.

Some of our agricultural societies have offered premiums for the "best stock horse of general utility." Will some one give us a description of the breed or animal which answers to that description? The breeders in Vermont, New Hampshire, Maine anp Massachusetts, should have an idea of all the styles of horses in demand, that they may act intelligently in their selection of horses to breed from, and a full description of a horse for all work, or of "general utility" would interest many readers of the FARMER, as well as one

OLD SUBSCRIBER.

Plymouth, May 18, 1868.

REMARKS.—The idea which is expressed by the terms quoted by our correspondent, might also perhaps be conveyed by another word—*medium*. The wealthy land-holders of England can keep a breed of race horses that do nothing but race, a breed of hunters that are used only for hunting, a breed of heavy horses that are good only for the dray or draft; breeds also for the coach, the farm, &c. But all this is not possible with the one-horse farmers of New England. We require a blending of the various qualities of these breeds into one animal, that may well be characterized as a "horse of general utility," a "horse of all work" or a "medium horse." We require an animal of fair weight, fair strength, fair speed, hardy and gentle. When put before the best carriage he must step off briskly, if not loftily; when hitched to a plough, cultivator or mowing machine, he must fill his collar; and when put into a team with oxen he must beat time in harmony with their slower motions. Such are a few of the points of the "horse of general utility;" and perhaps the Morgans and Messengers of New England fill the bill as well as any races in the country.

POVERTY AND IGNORANCE OF FARMERS.

I cannot consent that farming, as a profession, should be put down in the manner that your correspondent **Billy Styx**, has attempted to do it.

In the form of a question, he puts the affirmation, that "farmers, as a class, are a poor ignorant superstitious set."

On a well conducted farm a man need not be poor. I know farmers, even down here in this cold north-eastern extremity of the Union, who have more or less government bonds or other securities —in some cases amounting to thousands of dollars.

Nor is there greater necessity of their being ignorant. All through the winter they have the privileges of good schools, and the opportunity of more or less leisure, and if they are ignorant it is their own fault. There are farmers here whose sons are fitted for college, and whose daughters are women of refined manners and good education, and I deny friend "Billy's" assertion that farmers "have not time to learn, and are an ignorant set." He further says the "boys have to work early and late in mud and mire and in much 'that is not so sweet by half,' doing the work of scavengers, and all for nothing." That there are times in the year when farmers' boys have to work early and late I admit, but as a farmer's boy, raised in Maine, among Billy Styx's "poor, ignorant and superstitious set," I know that this is not generally so here, and I do not believe it is so elsewhere.

Again friend Billy says "the farm hand seldom gets twenty-five dollars a month, while in the shop forty is not uncommon." Now, dear Billy, I have myself labored on a farm in your own State, at $30 per month and board from March to December, and taught school from December to March. But let us look at the contemptible $25 per month and board through the year. At the end of a twelvemonth, it amounts to $300. With the $40 per month, that looks to Billy as such a "big bight," the wages for the year amount to $430, but after deducting $4.50 per week for board—certainly low figures—there are only $246 left, against $300 for the farm hand, and this on the assumption of no lost time, which is more probable in the shop than on the farm.

I admit that the farmer has or should have a good deal of manure to handle, but does that justify Billy's use of the word "scavenger," which is defined by Webster's Unabridged, a copy of which lies at my elbow, as a "person whose employment is to clean the streets of a city, by scraping or sweeping and carrying off the filth!" Is that a fair word to use as characteristic of the work of farmers' boys in the country? Are the breeding and training of the intelligent horse, the sturdy ox, the noble cow or the golden-fleeced sheep the occupation of a scavenger? Does the management of the mowing-machine, the harvester, the plough, or the cultivator, suggest the idea of scraping up the filth of the streets of a city? Now, Billy, please don't be quite so severe, but have a little mercy on us.

C. W. H.

Wiscasset, Me., May, 1868.

Remarks.—J. Burrows of Cedar Rapids, Iowa, writes to the New York Farmers' Club as follows: "Fifteen years of my life was passed in the "classic atmosphere" of a printing office, and before the war I published a paper. I have lived much in towns and cities, and know something of culture and refinement. I maintain that there is no better place in the world for a gentleman than on a farm. All the appliances of culture a gentleman need desire are within his reach. There is no such thing as being "forced into associations and companionship" *outside of one's own home;* and there is no labor connected with a farm which can in any degree degrade or demoralize a man of culture and refinement, *providing he owns the land he tills.* Now, I will hazard this assertion: Take fifty farmers, at random, out of any farming community in this State, and fifty men, at random, out of any village or city in the State of New York, and, upon careful examination, the fifty farmers will be found superior in intelligence, culture, true refinement, and above all, morality. The ambition to be a gentleman, with no knowledge of the true meaning of the term, is taking from the farm those who should make our best farmers, and it is leading thousands of young men to their ruin in our towns and cities."

"Green Mountain," of Milton, Vt., furnishes us with strictures on Billy Styx's communication very similar to those of "C. W. H." He appears to be rather indifferent as to the charge of poverty, but says, as one "farmer's son, though I may not be as bright as some, I do hate dreadfully to be called ignorant and superstitious." Still he is so little affected by Billy's tirade that he closes his first letter to the printers with the remark, "I intend to stick to the farm for a while longer, any way." Suppose, for the sake of the argument, that by doing so the whole Billy Styx family should persist in classing you with the poor, the ignorant and the superstitious, will it not be still true that the wealth which stings like an adder is worse than poverty; that the knowledge which some acquire is more undesirable than ignorance; and that the incredulity which doubts that the path of virtue is the path of safety is more to be dreaded than superstition? We leave this train of thought for the present, and conclude these remarks with the following words of wisdom from a living American writer, whose admonition should be carefully considered by those who are losing faith in old-fashioned honesty, industry, and economy, and are watching for some "easy situation." He says:—

The darkest day in any man's earthly career is that wherein he first fancies that there is some easier way of gaining a dollar than by squarely earning it. No matter whether he acquired it by beggary, by theft, or any fashion of gambling, that man is fearfully demoralized who, looking at the dollar in his palm, says, "That come easier than if I had earned it by honest labor." He has lost the clew to his way through this moral labyrinth and must henceforth wander as chance may dictate. To his distorted apprehension, the universe has become a gambling table, and life a succession of ventures on the red or on the black. His prospects of winning thereat, in the long run are miserable enough.

RED WATER.

Having a cow sick with red water, I beg to state symptoms and remedy for the good of the community at large. Not expecting the cow to calve for a fortnight or three weeks, she was tied up in a warm stable at night with my other cows as usual, and calved in the stalls. It was a fortnight before she cleansed, and then it did not appear to have been done naturally, but rather to have dried up and fell away. She grew so poor and thin that she was little better than a skeleton, though her appetite did not fail her except one day, and she milked well for a sick cow. She was seven years old the 28th of April last. She appeared to suffer much pain, and often set her back up as if she wanted to make water, and appeared to strain very much.

Her horns were quite cold all the time. I put her in a loose box without tying her up, and kept her in for several days. Fed out corn stalks and hay with a few mangolds and swedes and six ears of corn twice a day. I gave her about *two* tablespoonsful of saltpetre in *three* warm bran mashes in two days. I also gave her boiled oats same day, with about a small tablespooful of pulverized rosin in bran mash in the morning, and one large teaspoonful of spirits of sweet nitre in bran mash at noon and night. She had a good brushing down every day with a regular hand horse washing brush. The cow always calves standing up. It was a cold rainy night when she calved. The day she refused her food I slit her ear which bled profusely, and I think did her a deal of good. I always find rosin to assist my cows in cleansing, and attribute the sickness of this cow to her confined position when she calved. She is of a most irritable temper. Her calf was strong and healthy and now living. I never let the calves suck but two days, which is a great saving of time and trouble.

JOHN WHATMORE.

Bridgnorth Farm, Dunleith, Ill., May 8, 1868.

FARMERS' WIVES.

I am one of the many housekeepers who have been much interested by the articles in the FARMER on domestic duties and economy. Some of these writers, I think, are rather free with their "advice to housekeepers" of my sex, and somewhat reserved in their hints and suggestions to the men and boys. Some men not only thoughtlessly neglect to assist and encourage their wives and daughters in the labor necessary to make "home pleasant" and attractive, but actually thwart and discourage such efforts, and by example, if not by precept, encourage in the minds of the boys the notion that care for, or interest in, woman's work is derogatory to the dignity of manhood! Is not such an education of the masculine element as faulty as the training of girls of which "Mattie" and others have so justly complained?

For seventeen years I have endeavored to discharge the duties of a farmer's wife. I have usually done "my own work" with the help of my children, of which I have seven. I have two daughters which attend school, and who, though young, assist me when not at their studies, and I intend that instruction in the duties of housekeeping shall accompany their school lessons. As I am not only cook and chambermaid, but nurse and seamstress for the family, I intend that they shall have at least a "smattering" of each of these branches. Since our marriage, I have made many of my husband's garments, and for my oldest boy, fifteen years of age, we have not bought a single suit. I have been encouraged in my labors by the example of a wealthy woman of my acquaintance who had four daughters whom she carefully trained to the performance of all kinds of housework, including making and mending garments, especially those which were cast off,—even to their old stockings,—all of which must be neatly repaired before they were given away. In insisting on this she very sensibly admonished her daughters that though they might then be above the *necessity* of such work, they might not always remain so. Wealthy people may do this without losing caste, but how is it with those of us who are obliged to pursue this course to make a living? I do not ask, how it ought to be,—but as my daughters see it,—and, I must confess, as I have observed it,—what is its effect on our "respectability," or "standing" in society? Is not another class of "accomplishments" at a premium even in agricultural communities? Is not a white hand, especially if it is supposed to hold a few greenbacks, preferred to one a little browned by efforts to save the same greenbacks and to acquire that knowledge and those habits which will enable them to become helpmeets and co-workers with their partners in life?

AN OLD FASHIONED WOMAN.

Lexington, Mass., 1868.

EXCELSIOR HORSE HOE.

This implement, known also as the Chandler Hoe, is well and favorably known in Maine, where it originated, and is becoming popular in other States. It may be so arranged as to furrow, cover, cultivate or hoe the crop, and used with one or two horses, or oxen, as may be desired. Its first cost is not excessive, and it is said to do its work in a thorough and satisfactory manner. It is manufactured by Dunham & Currier, Bangor, Me., and we have noticed it for sale at the leading agricultural warehouses in this city.

RAISING CUCUMBERS AND MAKING PICKLES.

Some two or three years since I saw a communication in the FARMER relative to the raising of cucumbers for pickles, and as I am unable to find the paper will you please find the article above alluded to, and insert it again? I wish to know what kind of land is most suitable; what kind of fertilizer is best adapted to them; what is the best mode of pickling; and for what they generally sell in the Boston market. Should you answer this you will greatly oblige a subscriber. S.

Mansfield, Mass., May 25, 1868.

REMARKS.—We have never raised cucumbers or made pickles for the market, and cannot answer the above questions as fully as we could wish. In his *Gardening for Profit*, Mr. Henderson recommends sod or stubble land, which should be ploughed in early fall, and turned over twice or thrice in the spring before planting. The ground is marked out as for corn, four feet each way, and a good shovelful of well rotted manure dug in at the angle of marking, which forms the hill; the seed is sown, about a dozen in each hill, from the 20th of June to the middle of July. The average price of late years has been about $1.50 per 1000 in New York, without pickling we suppose. An average yield is stated at 150,000 per acre. A Cambridge market gardener once told us that as much as five cords of manure should be used per acre. The "Striped Bug" is a great annoyance, and must be closely attended to. Plaster of Paris is usually employed, as a preventive.

We do not know the process adopted by market gardeners for making pickles, but believe that they are generally preserved in brine. Cut the cucumber from the vine so as not to tear the end. Some families then scald them with boiling water, others

merely wash in cold water, and lay them in the cask into which a layer of salt has been previously deposited, so that when successive layers of cucumber and salt are made, the former will be embedded in salt, the moisture which covers them tending to dissolve the salt and convert it to brine. To finish the pickling process they must be put into vinegar. Having removed the cucumbers from the salt, some say they should be soaked eight or nine days, in fresh water, changed once a day, and then putting them in a clean cask pour hot vinegar, not too strong, over them. To make them sharp, the first vinegar may be turned off and saved for a second batch, and stronger vinegar applied. But we have no great confidence in these directions, which we glean from our back numbers. Pickle-making, like bread-making, must be learned by practice; and first attempts at any new business generally result in finding out what one really needs to learn. The price of cucumbers has greatly fluctuated within a few past years in Boston—the business being profitable some years, and unprofitable in others. We believe that those who raise them in this section generally make some arrangement beforehand with the city market men.

RAISING TREES FOR SEED.

I wish for some information on the subject of raising the soft and hard Maple from the seed; also the Spruce and Fir. Where can I obtain the seed of the two latter? Will the seed of both kinds of the maple grow if allowed to dry? Some say they will not. When should they be planted?

AARON P. FLETCHER.

Hudson, St. Croix Co., Wis., May 16, 1868.

REMARKS.—A little volume, entitled "Forest Tree Culturist," written by A. S. Fuller, and published by G. E. & F. W. Woodward, New York city, should be among the volumes in your Hudson library for the benefit of yourself and others who wish to plant trees, as it furnishes just the information needed in relation to their cultivation. As we remarked in an article upon the subject, a few weeks ago, the time of ripening of the seeds of different trees is quite various. The Elm and the Red and Silver Maple ripen their seeds in this section in June; the Sugar Maple in August and September, the White Pine in August, and the Pitch Pine some time during the winter. The Spruce we believe ripens its seed in the fall. The time for gathering varies of course with the time of ripening. As a general rule, the best time for planting is soon after the seed is mature. Some kind of seeds retain their vitality for a long time, and others for a short period only. The size of the seed is no indication of its vitality; the largest may perish much sooner than the very smallest. A seed will retain its vitality so long as the various substances composing it, such as starch, oils, &c., can be preserved from decomposition. Owing to the nature of most evergreen seeds they are poor keepers. So are the seeds of the soft Maples, which retain their vitality for only a few weeks, as their thin porous covering soon decays. If sown as soon as ripe in June, they will often make a growth of one to three feet by the time the Sugar Maple seed is ripe in autumn. Our city seedsmen sometimes have certain kinds of forest tree seeds, but we believe none of them pretend to keep an assortment. Your best course would probably be to write to some postmaster or friend who resides in a section where the seed wanted is produced, who would probably make arrangements to secure a supply, on your giving them reasonable notice. Messrs. Joseph Breck & Son of this city may be able to furnish a small amount of Spruce seed next fall. But most probably you can obtain the kinds you want much nearer home. A letter to Mr. Fuller, 245 Broadway, the author of the book above referred, (with a stamp for reply) would undoubtedly be cheerfully answered.

We regard the subject of your inquiries as a very important one to the farmers of the West, and believe forest trees may be more easily and cheaply raised than is generally supposed. Mr. Fuller thinks the cost of seed, preparing the soil, hoeing, weeding, &c., for the first season need not exceed $2 per 1000.

CARE OF HORSES.

The spring is a most trying time for teams, but those that have been worked steadily through the winter are best able to stand the increase of heat and length of days.

I have driven horses at the plough and harrow and seen them growing poorer and weaker each day. They were worked from 7 o'clock in the morning until noon, then after a rest of an hour to eat, were worked from one o'clock till 8 P. M., without rest,—being left standing in the field while a hasty supper was eaten by the driver.

Ten hours a day is long enough to work a team; and if a farmer cannot do his work in that time he should get another team. He should have harnesses well fitted, and not use the same collar on a twelve-hundred-pound horse, that he uses on an eight-hundred-pound colt.

Galls are the result of three causes,—friction, pressure and heat. Friction of tugs or traces, as the horse turns to the right or left, causes galls upon the legs, while other straps gall other parts. The back-pad and the collar cause galls by pressure and heat. When a team stops to rest a moment in a sultry day the collar should be lifted from the shoulder, to cool it.

If the horse becomes galled, there are various liniments and solutions that will speedily cure the sore, if the cause that produced it is removed. Among the remedies are alcohol and saltpetre, white lead, tincture of arnica, salt and vinegar. A bit of alum added to either of these mixtures might be beneficial. But it is better to prevent than to cure. When a horse comes in from work, a free use of a sponge and luke-warm water about the shoulders, legs and feet will add to his comfort, and in addition to good feed will tend to increase his usefulness. E. E. J.

Irasburg, Vt., May 16, 1868.

SCIENTIFIC AND EXPERIMENTAL FARMING.

As you invite contributions from your various patrons, allow me to say, after taking your Monthly for about half a year, that I think it is conducted on a liberal scale, and that it contains much valuable matter for all who are engaged in tilling the soil. Farming, however, has not arrived at

perfection. Though long strides have been taken in this direction, we have not yet reached that mile-stone beyond which there is nothing more to learn. The various processes of farming, and everything connected with the production of crops are undoubtedly susceptible of scientific, philosophical explanation; but until we attain such knowledge, the results of carefully observed experiments must be our guide. I suppose that it is an accepted principle, that the laws of nature are immutable; and that the substances which compose the material world are mutable. Hence, everything in nature is undergoing change; is either in a state of progression or of decay. So then we have no criterion to fix data.

This is probably the reason why your correspondents differ in their experiments and observations upon the same subjects. From apparently the same experiments they arrive at diametrically opposite conclusions, which tend, rather, to confound than to instruct. It would be better if communicators would give more practical tests and closer analysis of subjects, and more carefully reason from cause to effect. Surely the giving of opinion from ephemeral causes without anything to predicate one, is merely hypothetical.

G. W. DAVIS.

West Newfield, Me., March 15, 1868.

REMARKS.—It should be remembered by those who regret the unsatisfactory results of agricultural experiments, that farmers are not the only ones who experience contradictory results in their efforts to find an answer to old Pilate's question, What is truth? The experiments of scientific men are probably little more uniform in their results, than those which are tried by farmers. How often are the results of the most carefully conducted experiments of the best educated and most scientific physicians not only unsatisfactory but "diametrically opposite." Nor are the investigations of men of the other learned professions much more harmonious, as we infer from the different "schools" or sects, or theories which exist among them.

RED WATER IN COWS.—THE NEW ENGLAND FARMER.

About the first of April one of my cows was attacked with "bloody water." Being a young man, I knew of no remedy for this dangerous disease. But as good luck would have it, I had been thinking about taking the NEW ENGLAND FARMER, and had borrowed a few numbers of one of my neighbors for the double purpose of obtaining your terms and address, and for the pleasure of reading the valuable articles which I well knew they contained. In that of Jan. 21, a correspondent asks what he shall do for bloody water in cows. You gave him the following directions:—"Take one pound of Epsom Salts and one-half ounce of ginger, pour one quart of boiling water over them, stirring till dissolved, then when cold add one-half ounce of carbonate of ammonia; give this, and if that does not move her bowels, give one-quarter of the dose once in eight hours until it has the desired effect." This was one of the first articles which caught my eye; and when, a few days after, I found one of my cows was thus affected, this remedy was remembered, and referring to it. I followed the directions, and in less than five days my cow was perfectly well, and we all think she now looks better than we ever saw her before. I have since inquired of many of my neighbors, to see if they could give me any remedy for this disease, but found that no one of them of whom I inquired were able to do so; and I am convinced that the cow would have soon died had it not been for the timely information thus obtained. I have since subscribed for the FARMER and am cheered each week by its welcome visits. L. O. W.

Proctorsville, Vt., May 14, 1868.

CRUELTY TO THE BIRDS.

In the FARMER, last year, a writer recommended, for the purpose of preventing birds pulling corn, to "string some kernels on horse hair or thread, and when the corn is coming up throw this on the field. The birds will pick it up and swallow it. The thread or hair will stick in their throats, and in trying to get it out, they will scratch out their eyes." This is cruel. The end to be gained does not justify such barbarous means. If any one after accomplishing this feat, of making a bird swallow a horse hair, should witness its struggles to be relieved from it, should see it scratch out its eyes, witness its agony, and then be compelled constantly to witness its lingering distress while dying by the slow process of s arvation, if possessed of one particle of humanity, I think he would never again attempt a like operation.

Derry, N. H., May, 1868. E. B.

TAR FOR SICK SHEEP.

I started to winter thirty-four sheep, for the purpose of raising lambs for market. Towards spring they began to lose flesh, had a dull sleepy look, with a foul, bloody discharge from the nose. They grew weak and in a short time some died. I lost four of my best sheep in this way, and three others were apparently about to die, when I thought I would try to save the rest of my flock, if possible. I therefore got some good clean tar, and made each sheep eat some of it, and also put some on their noses. They soon began to look brighter, and appeared better, and I did not lose any more. I fed tar once a week by putting it in their mouths, so that they had to eat it. I told one man who had lost about 60 sheep of my remedy and he tried it and said it saved him more than twenty-five sheep and he thought if he had used it before, he might have saved nearly all. I also feed a little sulphur with salt. J. A. L.

Barre, Vt., May 31, 1868.

COW CORN.

Much has been written, and much has been said in favor of raising corn fodder. As a consequence almost every farmer raises it. Perhaps this is very well. But, for cows that give milk, I am satisfied from experience, that it is inferior to weeds from the corn field, second crop, or good hay. Some get the impression that corn fodder is good for milch cows in this way:—when the pastures fail they give them corn fodder and find the quantity of milk somewhat increased; but they do not compare it with anything else. If they would give them corn fodder one week, and second crop the next, they would find a difference. Many other articles, such as squash vines, pea and bean haulm, if they have not been severely injured by frost, or by standing too long in the field, are readily eaten by cows, at a time when they need, but do not always get, extra feeding; and I think it better to save them for this purpose than for composting in the barn-yard, as I have seen recommended.

Derry, N. H., May, 1868. E. B.

SALTING CHEESE.

About a year ago I saw an article in the FARMER (Monthly p. 368, 381,) about strong cheese, in which you seemed at a loss to account for the great difference in flavor. From own experience and that of one of my neighbors who has long

kept a dairy, I think the secret lies simply in salting,—either too much or too little, or that of poor quality is used. My neighbor says that he lost twenty-five dollars in one year, by using fine salt, such as is put up in small boxes. A short time ago I saw a statement to the effect that ordinary fine box salt would not keep butter sweet for any length of time. If it will not preserve butter neither will it keep cheese sweet. M. P.

West Westminster, Vt., May 8, 1868.

TOMATOES *vs.* THE BORER.

I saw in your last paper, an inquiry by some one as to what he should do to keep borers out of his trees. Two years ago, in looking over my trees in the fall, I found borers in all of them but one. Noticing a tomato plant by the side of that tree, I thought that perhaps the smell of the plant might be the reason. Last year I tried it, and found none, where I had tomato plants. Speaking to a neighbor about it, he said he was never troubled with borers, but he had always had tomatoes by the side of the trees. I shall try it this year, setting the plant as near the trunk of the tree as possible. Give it a trial, all of you who are troubled with borers. B.

East Randolph, Mass., May 26, 1868.

For the New England Farmer.

OPEN AND TIGHT BARNS.

Having read the discussion in the FARMER on the subject of open and tight barns, I will give you my experience, with the remark that while I consider theory on this, as on other subjects, very good, I think practice a little better.

In 1840 I built a common barn for the times, finishing with unseasoned boards, put on singly. Consequently, I had plenty of side ventilators, as the cracks were neither small nor few. I soon learned that the hay must be well cured before being put in, or it would heat, mould, and sometimes spoil in the centre of the mows, while near the walls of the barn the hay was bright and good. I also learned that in leaving the barn doors open during the hay season, as many farmers did, the hay next the floor, especially near the door, looked like hay which had taken the storm and been badly washed. From old farmers I furthermore learned that hay intended for the stack must be thoroughly cured, even more so than for the barn.

In 1850 I built another barn, and acting upon the knowledge gained so far, I made the walls tight as common double boarding would make them. And now for the result. I have not during the sixteen years I have used this barn, had a particle of mouldy or burnt hay, except it was wet by storms and put in before dry. I cart my hay much greener than formerly. I do not hesitate to cart English hay that is sufficiently ripe, as soon as I can after it is cut, provided there is no dew or wet on it when mowed. My hay is relished by the stock better than that which is all dried up. If the grass is very green, or stout clover, I would prefer to let it stand in the cock over night, but think that too much drying injures the hay.

A mixture of herdsgrass, just in the blow, and western clover, the blows half turned, which yielded two and a half tons per acre, actual weight, was cut in the forenoon and carted in the afternoon of same day into the last built barn, and came out nice and bright in the spring. For an experiment, I spread some of this hay upon the beams of the barn, turning it occasionally for two weeks, to ascertain the shrinkage when thoroughly dried under cover, and found it to be seven hundred pounds to the acre, or two hundred and eighty pounds per ton.

With the knowledge thus gained, I conclude that the less the air circulates through the mows, or the less exposed the hay is to the weather, the better for the hay, and the less is it liable to heat; that by closing all cracks or avenues for the wind and storms what heat there may be in the hay is equally disseminated through the entire mass without injury to the hay; but that if the heat be forced from the outside surface to the centre, the outside hay will be bright while the centre will be more or less injured,—sometimes burnt and mouldy. With this experience I shall continue to store hay in barns made tight as practicable, notwithstanding there may be much theory not based upon practice, to the contrary.

I have also learned that cattle thrive best, in winter, when kept at a temperature little above the freezing point; but that if kept so close and warm as to sweat, or become moist, they will not eat. I prefer to have the stable a little cold, rather than too warm. If too cold, however, food does not seem to make them thrive, although they may eat enough to satisfy the most skeptical; especially if short of hay. A very little trouble will regulate the temperature of a stable, and is well paid for in the satisfaction one enjoys in the comfort and thrift of his animals. A.

Washington County, Vt., 1868.

REMARKS.—For its usefulness the NEW ENGLAND FARMER is largely indebted to such practical articles of its correspondents as the foregoing.

For the New England Farmer.

ITEMS OF A FARMER'S EXPERIENCE.

FEEDING YOUNG PIGS.—I once bought six pigs of neighbor Flint, taking them at an early age, because we had an abundance of skim milk to feed them with. In the course of a fortnight, first one and then another sickened. The prominent symptoms were, loss of appetite, staggering with a backward motion and falling on the haunches, and finally inability to rise at all. The first two that were attacked died in a few days. One of the others seemed near death, and all were more or less affected. At my request Mr. Flint examined them, and thought the trouble was a costiveness caused

by their being fed exclusively on *skim milk*. He recommended giving them *thorough-wort tea*. I did so at once, by means of a spoon, administering it three or four times in the course of the afternoon. They took it as readily as a young child would its usual food. In a few hours they all began to improve, and the next day were considered fully recovered, and thenceforth went on eating and drinking, and thriving, as all good piggies ought to. Being afterward supplied with a variety of food, they never again showed symptoms of any disease.

Probably if these pigs, on being taken from the mother, had for a time been fed with milk warm from the cow, instead of that which had been deprived of its cream, there would have been no sickness among them. I happen to know, from familiar experience, that a free use of skim milk as a beverage, has a tendency to produce costiveness in the genus *Homo*,—and am disposed to infer that it will have a similar effect in the genus *Sus*.

BUTTER-MAKING IN WINTER.—Some years ago, while making butter from the milk of eight cows, though in summer the butter would come in from fifteen to thirty minutes, it was found that, as winter approached, the time required for churning gradually increased, till, about the middle of November, the cream refused to part with its butter even after five or six hours' churning, though kept at the temperature of about 60° Fahrenheit. After that time we could get the butter only by scalding the milk before it was put in the pans. We then came to the conclusion that butter could not be made in winter without scalding the milk. But a little further experience has shown us that we came to this decision too hastily. We have, through the past winter, made good butter from a young cow (got by an Ayrshire bull out of a half-Jersey cow,) with but little more trouble than it formerly cost in summer. This shows us, what probably older butter makers knew before, that there is as much difference in cows "as there is in other folks." We knew before that the cream of some cows would yield its butter in summer much quicker than that of others, but we had not gone so far as to learn, that, while from some the butter will not in winter come at all without the process of scalding, that of others will come readily if kept at the right temperature.

I suppose the old farmers are wise enough already, and can take care of themselves. But let me suggest to those young ones who may be about to buy cows for a butter dairy, that they will do well to select with great care, and test them individually with reference to this point of difference in time required to produce butter from their milk. If one cow in the herd gives milk whose cream is slow to yield butter, it would be better to put her to a different use at once.

WOODPECKERS.—It is pleasant to feel that we belong to a superior race; and I do not intend to discontinue boasting a little, occasionally, of the wonderful capacities and varied powers of man. But I think we may often find, in observing the habits of the *inferior* animals, as we are fond of calling them, that they often display a keenness of observation, a tact, a certainty of coming to what they aim at, that it would be difficult for most of the superior order to equal in the same line. For an example in a small way: I cut down a black oak, forty or fifty feet high. In trimming it up near the top, it was found that a woodpecker had recently tapped it, making a hole to the centre. On a careful examination, it could be seen where the bark had previously been punctured by some insect for the purpose of depositing its egg. On splitting open the wood, which was about three inches in diameter, the course of the grub could be traced from the surface to the centre, and then downward, following the pith, for five or six inches. Precisely at the lower end of this passage, the woodpecker had struck, pierced to the depth of an inch and a half through the solid green wood, and taken out the grub. Now I doubt whether even one of our best trained musicians, whose ears will detect a variation of a quarter of a tone in music, could have succeeded so well in this case. If he could, by rapping a few times on a green tree, not only make sure that a grub had bored a passage along the heart of the wood, (remember, this passage is filled again by the chips as the grub works along,) but decide correctly on the precise spot occupied by the grub,—well, if he could do that, it is my candid opinion that he would be entitled to the credit of having a very good ear. M. P.

Concord, Mass., May, 1868.

BOTS AND WORMS IN HORSES.

In his new work, "The American Farmers' Horse Book," Dr. Stewart claims that the bot is hereditary with the horse, and is born into the world with him; the colt, at the moment of foaling, having a little parasite in his stomach, in as perfect a state as the horse of six years. The author goes on to state that the bot is found attached to the cuticular or insensible coating in the upper portion of the stomach —not by his head as is popularly supposed, but hanging by his tail. For a mouth he has a little orifice, no larger than the point of a cambric needle, with which he feeds upon the food in the stomach, after it has been softened down into chyme. This tiny mouth he can close against any substance which offends his dainty taste; and being protected by a scaly or bony covering, upon which no acid, caustic or poison, will operate, he is much safer from the action of any hurtful element than the horse into whose stomach he is introduced. There is no evidence, says Mr. Stewart, that, in his normal condition, the bot ever injures

the horse's health in the least degree. The bot is pronounced to be an entirely different insect from the grub or worm, with which he has no relationship whatever. The latter is the offspring of the gad fly, and is undoubtedly an intruder. It is a species of light yellow worm, which passes away from the horse in the excrements during the months of July and August, and becomes imbedded in the earth where the chrysalis is formed, whence in time is hatched the fly. The eggs of the fly are deposited upon the horse's skin, are bitten off and find their way into the horse's stomach. Here the worm is developed in time, and thus the species continues to be propagated. Unlike the bot, the grub never attaches itself to the coating of the stomach, but lives among the particles of food, the tough fibrous portions of which it decomposes and in both stomach and bowels undoubtedly performs the same office for the horse that worms do in the child. When multiplied in great numbers the grub may occasion much uneasiness and irritation, but never causes death or even serious disease.

As to the popular belief that the bot causes the death of the horse by eating through the stomach, Mr. Stewart says:—Although the stomach is often found "completely riddled by the bot," as the popular expression is, there is good reason to believe that the work is done entirely after the horse is struck by death." One or two facts will go far to prove the truth of a proposition which to many will appear so extraordinary.

The cuticular coating of the stomach to which the bot fastens himself by means of two little bearded hooks, is nearly if not wholly insensible, having no more feeling apparently than the animal's hoofs. When the horse is in health it is hard, rigid, impenetrable, and the bot, if ever so much disposed to do so, would attack it in vain; but when death seizes him this coating becomes relaxed and soft and begins rapidly to decompose. Then only it is that the bot can or ever does work his way through it. Another fact still more strongly corroborative of the above proposition, is this: that of any number of horses killed while in perfect health, and opened an hour or two afterward, there will be found not one whose stomach is not "riddled by the bot." Dissection has revealed the existence of this condition in hundreds of instances of sudden death from accident.

Dr. John Franklin, of Sumner county, Tennessee, relates the case of a horse instantly killed by the falling of a large timber, whose carcass he opened within a few hours after death, with the especial object of testing the theory that the bot forces a passage through the walls of the stomach in all cases when the disease is not of such a nature as to stupefy him. As he expected the insects in considerable numbers had already cut their way out. The bot does not attack the stomach for the purpose of preying upon it or of injuring the animal, but simply to seek escape from certain death himself. The same disease that is killing the horse threatens his destruction also. An instinct similar to that which prompts vermin of nearly all kinds to leave a dead or dying carcass, teaches him that his old habitation is no longer a safe one and hence his desperate endeavors to get away. He has been found working up to the esophagus, passing through the small intestines and even cutting through between the ribs almost to the skin itself. If possible he would escape from the horse entirely."

These views are so different from those usually held by horsemen that we give them for the benefit of those interested in the care and management of horses. If they be true, the practice of drugging the horse with medicines for the purpose of stupefying or arresting the supposed action of bots is useless and injurious.—*Utica Herald.*

FLOWERING TREES.

In trees with rosaceous flowers, nature exhibits some of the fairest ornaments of northern climes; and these are the only trees that produce a pulpy fruit. Such are all the trees of our orchards—the cherry, the peach, the apple and the pear; also the mountain ash and its allied species, down to the mespilus and the hawthorn. These trees are suggestive rather of the farm and its pleasant appurtenances than of rude nature; but so closely allied to nature is the farm, when under the direction of its unsophisticated owner, and unbedizened by taste, that its accompaniments seem to be a rightful part of Nature's domain. The simplicity of the rustic farm coincides with the fresh glowing charms of nature; and a row of apple trees, overshadowing the wayside, forms an arbor in which the rural deities might revel as in their own sylvan solitudes; and Nature herself wears a more charming appearance when to her own rude costume she adds a wreath twined by the fingers of Pomona.

The blossoms of the rosaceous trees are invariably white, or crimson, or the different shades of these two colors combined. Those of the cherry and the plum are constantly white; those of the peach and the almond, crimson; those of the pear and the mountain ash are also white; and those of the apple, when half expanded, are crimson, changing to white or blush color as they expand. The colors of the hawthorns vary with their species, which are numerous. As I have already intimated, Nature is not lavish of those forms and hues which are the ingredients of pure visual or objective beauty. She displays them very sparingly under ordinary circumstances, that we may not be wearied by their stimulating influence, and thereby lose our susceptibility to the impressions of homely objects. But at certain times, and during very short periods, she seems to exert all her powers to

fascinate the senses. It is in these moods that she wreathes the trees with flowers for a short time in the spring, and, just before the dusky shades of autumn have settled upon the earth, illuminates the forests with colors as beautiful as they are evanescent.

Another group of flowering trees—found rarely in northern climes—is represented by the magnolia and the tulip tree. These trees have obtained a great deal of celebrity on account of their blossoms, which are chiefly remarkable for their extraordinary size and their powerful fragrance. The magnolia, with its dark evergreen foliage, is a valuable gift of nature to the inhabitants of the arid plains and valleys of the South; and its flowers make a magnificent appearance at certain seasons. The tulip tree has many of the same characteristics; it attains in favorable situations an extraordinary size, and is an admirable ornament for dressed grounds, where its lofty stature, its symmetrical form, its smooth branches, and its polished foliage, are in "excellent keeping" with the graded lawn, the fanciful flower beds, the serpentine walks, and other pseudo-natural affectations.—*Atlantic Monthly for June.*

HIVING BEES.

When bees are allowed to swarm naturally, everything should be in readiness before the swarming season arrives, so that when swarms come off there may be no confusion or difficulty in hiving. Hives should be kept cool, and if old, they should be well cleaned. If a swarm is seen issuing from a hive, do not get in a "flurry," but keep cool, and nineteen times out of twenty they will cluster all right. As soon as they have settled, prepare to hive them.

First.—Bring a dish of cold water, and with the hand or a whisk of grass, sprinkle the cluster well. This will make them perfectly quiet and easy to handle. Bring out a table, or if that is not convenient, spread a cloth or boards upon the ground, and if they are to be hived into a common box or straw hive, set it upon the table or place prepared for it, raise up one side an inch or more, and put under a stone or chip to hold it. Then shake your bees into a pan, basket, pail, or any dish that will hold them, and turn them down near the hive, and they will at once commence to enter. If it is desirable to have them enter faster than they are naturally inclined to do, take a wing and gently wing them in. As soon as all or nearly all are in, the hive should be carried to its stand, and well shaded if the sun is shining. New hives or newly painted hives should be shaded for several days, as bees cannot stay in an over-heated hive. If the bees cluster upon a limb, from which it would be difficult to shake them, the limb may be cut off with a saw and laid near the hive; the bees will soon leave and enter. Sometimes bees will cluster upon the body of a tree, when it is more difficult to get them off without irritating them. They should be well sprinkled, and very carefully brushed off with a wing or quill feather into a dish, and carried to the hive as before stated. An inexperienced person, or novice, should in this case wear a bee-protector. It will give them courage, and they will move more carefully.

Swarms should never be allowed to stand where they are hived until evening, as is the practice with some, but should be moved at once to their stand, as some of the bees will go into the field to work in ten minutes after they are hived; and if left until evening large numbers will have commenced to work, and having marked the spot will return there the next day, and not finding the hive, will wander about, and many will be lost. Second swarms are generally far more irritable than first or top swarms; hence, these are far more likely to sting; but cold water will soon quiet them, and they may then be hived with safety. —*Canada Farmer.*

THE SWEET POTATO.

The land for this potato should be deeply ploughed, well harrowed, and thoroughly pulverized. It should then be made into ridges about thirty inches wide, and twelve inches high, and about four feet apart in the rows. The tops of the ridges should be levelled. A hole should be made with a trowel large and deep enough to receive the plant, which must be started in a hot bed or otherwise; fine, mellow earth should be rattled in about the roots till the hole is filled within about an inch of the surface. Should the weather be dry, a small portion of water is poured in among the roots of each plant, and then allowed to soak, then more earth put in to fill up the hole. As soon as the plants begin to grow, they may be hoed and cleaned until the vines begin to grow. The ridges should be kept clear of weeds, and the surface loosened by the hoe. Should the vines be inclined to strike or root at the joints, they should be carefully lifted and laid on the top of the ridges. This leaves the soil well exposed to the sun. Sweet potatoes should be dug before the frost. The Brazilians and Nansemonds are thought to be the most productive.—*Rural West.*

—Wool buyers say that farmers might as reasonably expect to sell cobs for the same price as corn, as grease and dirt for the same price as wool. And they probably think that saying hits somebody pretty hard. At the West we believe corn is sold with and without the cob on which it grows, and when wool buyers understand their business as well as corn buyers do theirs, we think none but those incompetent to buy wool on its merits, will think there is anything very smart in such flings at wool growers.

SALT IN FATTENING CATTLE.

There is no doubt that the use of salt increases the appetite of animals, and enables them to digest more food, and consequently to take on more fat. There ought to be more accurate knowledge on this subject, especially among those who are stall-feeding stock.

The following is the substance of an account of experiments by Theodore Von Launer in the use of salt, which we find in Von Weekherlin's *View of Food*.

The last winter he made an experiment for determining the influence of increasing doses of salt on the appetite of horned cattle in the case of two lean oxen of 1740 lbs., live weight.

For two weeks these oxen received twice a week, in the evening, per head, one and one-half ounces of salt, with which both oxen consumed daily, thirty-four lbs. of choice hay, on an average.

After this, the two oxen received the above mentioned portion of salt daily, for ten days, in which, on an average, they both together ate forty and one-fourth lbs. of best hay. With the same daily portion of salt, the two oxen consumed in the next nine days, an average of forty-six and one-half lbs., of best hay; and with the same daily portion of salt, their daily consumption in eleven days more amounted to fifty-one and one-half lbs., best hay.

Afterwards the two oxen, for eighteen days, received daily, twice a day, the usual quantity of salt, and their consumption of fodder rose on the average daily, to fifty-five and three-fourths lbs. of hay.

Then they received the usual quantity of salt daily, three times in the day, and their daily average consumption of hay fell to fifty-one lbs.

This portion of salt then appeared to be too large, and they were given again the usual portion of salt once a day, on which their daily consumption of hay, as before with the same quantity, reached fifty-one and one-half lbs.

The daily consumption of thirty-four lbs. rose, therefore, with the daily dose of salt to fifty-one lbs., and with twice a day a portion of salt, to fifty-five and three-fourths lbs.; while by its being given three times a day, it sunk to fifty-one lbs., for the two oxen.

From this exhibit it is evident how important is the furnishing a proper dose of salt to horned cattle, especially when coarse hard hay or much straw is foddered to them.

The writer does not state whether the drink which the oxen took was increased in like proportion. But another German farmer, in the same work gives an account of an experiment in giving salt to ten fattening wethers, and none to ten others, which were fattening with them, at the same time. Those which had the salt drank during the experiment, the time of which is not stated, 533 measures of water, while those which had no salt drank only 256.

When cattle are feeding upon dry hay, it is desirable that they should drink freely, as the hay is thereby softened, and its nutriment more completely extracted. This is especially true of cows giving milk, which, as is well known, will drink more than dry stock, because a large portion of the fluid received, is taken up by the milk-forming organs. The daily use of a proper dose of salt, would probably promote in them an appetite for drink, as well as for hay, and thus increase the supply of milk. But too large a dose, it seems, will diminish the appetite. The proper dose must be determined, in the case of each animal, by experience, for different animals will doubtless require different quantities.

An overdose of salt generally irritates the coats of the intestines, and proves cathartic, both in men and animals.

CLOVER SEED.

We think there is less clover seed raised in this State, and indeed in New England, than formerly. We are in the habit of depending upon imported seed. At the present price of the seed it may be made a profitable crop, and there is no reason why our farmers should not raise at least what they need for their own use. As we hope to see clover more extensively cultivated, not only for its value as fodder, but as a means of improving the soil, we think it important that the domestic supply should be abundant, as it would then be more freely used.

Clover, rightly managed, is a profitable crop. The first crop should be cut early, and if properly secured there is no better hay, especially for milch cows and sheep. This crop should be cut about the first of July, or by

the time one-half the blossoms are open. Then there will be a good second crop, but if we wait till the seed is formed in the first crop the second crop will be greatly diminished. Deferring to cut the first crop ten days may nearly spoil the second. It is on the second crop we must depend for the seed. With a good catch and proper care, there will be from two and one-half to five bushels of seed to the acre, worth now six dollars per bushel.

The second crop should not be allowed to stand till it is over-ripe, as then much of the seed will be lost in harvesting. Now, let us look at the result. One and a half tons at the first crop, worth say $24. The second worth $10, and three bushels of seed worth $18, the whole amounting to $52. What crop do we raise of equal value for the same labor?

In Pennsylvania, where they raise a good deal of clover seed, it is not uncommon to feed the clover fields till the fore part of June, and then let it go to seed. In this way, it is said, they often get five bushels of seed. They then plow up in the fall, and sow wheat. Plaster in most parts of the country is found to be one of the surest means of bringing a good clover crop. We are in the habit of sowing red top and herdsgrass with clover, with the intention of letting it remain as a meadow three or four years. This makes the very best of hay. When we would get a crop of clover seed, we should sow the seed with grain, and not feed off in the fall; then after taking the first and second crop of clover, we may plow and reseed in the fall with herdsgrass and redtop, if we wish to mow it for a few years, top-dressing as may be needed.

CULTIVATION OF CORN.

The *Western Rural*, published at Chicago, has had much to say in its late issues upon this subject. This is as it should be, as corn is *the crop* of the great West. We are glad to see the modes of culture, the importance of manuring, the use of fertilizers and other topics thoroughly discussed. The editor is urging the cultivation of less land and doing it more thoroughly than in times past. This is the only way of arresting the process of exhausting the soil, which is going on so rapidly, and is beginning to tell upon corn, and has to an alarming degree upon wheat. In the last number he states some facts which are interesting to Eastern no less than to Western farmers. He says:—

"Several experiments have been made to ascertain the proper depth at which to plant corn, and by one of them it was ascertained that when it was planted three inches deep, it came up and grew well until it was three or four inches high, and then stopped for a fortnight, while the corn in the same field, which was planted at a less depth, grew rapidly. On examination it was found that a joint had formed about one inch and a half above the kernel, and that the roots had sprouted out from that joint, leaving all below to perish. While the process of changing roots was going on, the plants ceased to grow above ground, but in about a fortnight recovered their vigor, and they were about that length of time later in maturing the grain than the seeds that were planted shallower.

A series of experiments showed that corn planted at the following depths came up as described:—

No. 1	planted at a depth of	1	inch	came up in	8 days.
" 2	" "	1½	"	" 9½	"
" 3	" "	2	"	" 10	"
" 4	" "	2½	"	" 11½	"
" 5	" "	3	"	" 12	"
" 6	" "	3½	"	" 13	"
" 7	" "	4	"	" 13½	"
" 8	" "	4½	"	" —	"
" 9	" "	5	"	" —	"
" 10	" "	5½	"	" 17½	"
" 11	" "	6	"	" —	"

Nos. 8, 9 and 11 were dug up after twenty-two days, when it was found that No. 8 had an inch more to grow to reach the surface.

Nos. 9 and 11 were three inches beneath the surface. No. 10 came up in seventeen days, but withered after six days' growth. The more shallow the seed was covered the more rapidly the sprout made its appearance, and the stronger was the stalk. It is hoped that many more careful experiments will be made this year with regard to the merits of deep and shallow planting.

WOOLEN RESOLUTIONS.

This is a great country for "resolutions." They are manufactured by congresses, legislatures, conventions, associations and divers other "bodies." Webster passes the word along with only eight definitions and one "pictorial illustration," while Worcester enumerates no less than ten distinct meanings! But are either of these lexicographers equal to the task they have undertaken? Can it be done by pen or pencil? A bull of the Vatican and a resolve of the American may be felt, but can hardly be described. A Turkish firman, a Russian ukase, and a royal decree have settled many knotty questions and removed many ugly difficulties, but a universal solvent has been found only in the modern "resolution."

To buy each lot of wool in the country as each lot of grain, and cattle, and butter, and other kinds of agricultural produce are bought, —on its own merits,—involves no little work and the exercise of no little skill. Grain is harvested and hay is made by machinery, and

so is cloth. Why may not wool be bought in the same way? A machine for buying wool, like that for other purposes, should be simple. The less wheels and springs and levers the better. This bright idea, however, was a little too bright to be realized by ordinary machinists, and our wool manufacturers and wool dealers, being thrown upon their own resources, at once exercised their genius in the production of a "series of resolutions" with which they hoped to accomplish the same purpose.

The following which we have before published, are the "plan and specification" of such an invention by the North-west Woolen Manufacturers' Association, in general council assembled, some months since, at Chicago:—

1. Merchantable wool shall be standard for price, and must be well washed, free from tags and all filth, and tied with only what twine is sufficient to hold the fleeces together.
2. On all unwashed fleeces, fleeces stuffed with tags, murrain wool or any other foreign substance, black fleeces and all washed buck fleeces, a deduction of one-third shall be made.
3. On unwashed buck fleeces, a deduction of one-half shall be required.

Now, that looks as though it might work, and save a great deal of labor and much bother; and so perhaps it would, if the inventors had secured letters patent on the exclusive right to pass resolutions, as well as to use the "one-third" pulley. Neglecting to do this, we fear their invention will be of little practical utility, as the door is left wide open for the introduction of opposition machines.

The Washington County, N. Y., Sheep Breeders' and Wool Growers' Association, taking advantage of this fatal omission, on the part of the manufacturers, have adopted the following resolutions,—which on the principle of Knickerbocker's justice, who weighed the account books of the parties to a suit he was trying, entitles them to the verdict:—

Whereas, Commission merchants and wool dealers in market have, heretofore, for their own convenience and profit, adopted a rule to shrink all unwashed wool one-third, without regard to its intrinsic value or condition; and

Whereas, The wool buyers in varrious sections of the country, who are agents of wool dealers, and under their influence and suggestions have formed associations and passed resolutions adopting this unjust and oppressive rule, and pledged themselves to make their purchases in accordance therewith; therefore:

Resolved, That the sheep breeders and wool growers of the country are compelled and in duty bound to take summary steps to protect themselves against this associated combination, and prevent the universal adoption of a rule so unjust and oppressive to their interests.

Resolved, That the article of wool, like all other farm products, should be sold on its merits, the condition of the article governing its price; and while it may be both convenient and profitable for the wool dealer to adopt the one-third rule to protect him from the ignorance and blunders of inexperienced agents, it would be more just to both parties to employ agents who understand their business.

Resolved, That it is the duty of the State Wool Growers' Associations, and all the county associations in this and other States, to adopt resolutions and recommend all wool growers to resist, and, if necessary, to decline dealing with all agents who insist upon this rule.

BUTTER THAT WILL KEEP.—We have seen the statement that "a dairy made in Broome County, N. Y., was sold in St. Croix, in 1839 to the Governor, for 75 cents per lb. In 1840 the same dairy was sold in New Bedford, Mass., and went on a whaling voyage. *I saw some of it after the expiration of nearly four years, as sweet and in as good condition as when made.* The same dairy has since been sold in New Orleans, in Natchez, and Mobile, and there has never been any complaint as to its quality. I shipped some butter made in that county to Canton, in 1846, which opened as fresh as when made, and was so good that shippers have each year since applied to me for butter for cabin stores. I broke up the firkins, and procured small white oak kegs, containing from fifteen so twenty-five pounds each, repacking the butter. These kegs were put into large hogsheads and filled in the interstices with rock salt, and placed in the hold of the vessel. The small kegs were used merely with reference to the convenience of retailing at Canton."

"Orange County butter" is now understood to have reference to the mode of manufacturing, rather than to the locality where made. In making this butter the milk is churned and rock salt is used.

HEATING NAILS.

Every one who has used them knows that cut nails are brittle and easily broken (some brands more than others), but when heated to a red heat and then cooled slowly, become soft, and will generally clinch as well as wrought nails. Jacob Abbott thus explains the matter in a story which he tells in *Our Schoolday Visitor*:—"Common nails, being cut out from a plate of iron by means of shears working with prodigious force, have the substance of the iron so compressed that they are somewhat brittle, and the points are very apt to break off if we attempt to clinch them. But these common nails can be softened by heating them red hot in any common fire and letting them cool slowly. The iron of the nails, which is compressed and made hard by the action of the machine in which it is manufactured, is swelled out again by the heat of the fire and restored to its natural condition."

THE GRASS.

The grass, the grass, the beautiful grass,
That brightens this land of ours,
Oh, why do we rudely let it pass,
And only praise the flowers?
The blossoms of spring small joys would bring,
And the summer bloom look sad,
Were the earth not green, and the distant scene
In its emerald robe not clad
Then sing the grass, the beautiful grass,
That brightens this land of ours;
For there is not a blade by nature made
Less perfect than the flowers.

The grass, the grass, the feathery grass,
That waves in the summer wind,
That stays when the flowers all fade and pass,
Like a dear old friend, behind;
That clothes the hills, and the valley fills,
When the trees are stripped and bare;
Oh, the land would be like a wintry sea
Did the grass not linger there;
Then sing the grass, the bonny green grass,
That to all such a charm can lend;
For 'tis staunch and true the whole year through,
And to all a faithful friend.

The grass, the grass, the bountiful grass,
Oh, well may the gift endure,
That never was meant for creed or class,
But grows for both rich and poor;
Long may the land be great and grand
Where the emerald turf is spread;
May the bright green grass, when from earth we pass,
Lie lightly o'er each head.
Then sing the grass, the bountiful grass,
That stays like a dear old friend;
For, whatever our fates, it kindly waits,
And it serves us to the end.

For the New England Farmer.

SEEDING LAND.

The following abstract of the discussion by the Irasburg, Vt., Farmers' Club of the subject of the proper quantity of grain and grass seed per acre, and the best manner of putting it in, is furnished for our columns by the Secretary, Z. E. Jameson, Esq.

J B. Fassett said he had raised but little wheat, but usually sowed one bushels and three pecks per acre. Of oats some sow two and some ten bushels per acre. He tried a piece by sowing three bushels per acre over the whole, then on one side of the dead furrow he sowed as much more—equal to six bushels per acre. The part double seeded was thicker at first, but at harvesting he could see no difference, and thought there was none between the two sides. He now sows from three to five bushels. In planting potatoes this year, ten bushels cut fine did not suffice for an acre, with hills two by three feet apart. He has a piece in grass on which he sowed sixteen quarts timothy, and three pounds clover per acre, and he is satisfied with the appearance of the grass. He thinks too much clover is often sown as it is a short lived crop,—the second and third yield being small. He had a piece so stout one year, that it took three men half a day to mow an acre; the next year there was not ten cwt. per acre. He sows his grass seed when he does his grain, and harrows it the same. When grass seed is only bushed in it may come up, but if we have a dry season it will wither; but cover it deeper and it will stand drought as well as grain. Grain should be harrowed thoroughly, so as to cover it deeply. In planting corn he takes pains to have the rows very straight,—not varying over three inches from a line in twenty-five rods. Thus planted it looks better and is more convenient to cultivate and hoe. He cuts stakes just as long as he wants the distance between the rows, and sets them in line for the first row. Then, as he plants, he goes straight toward his stakes, and as he comes to one he pulls it up, and sticks it in again just its length from where it first stood, so that when he gets through with one row his stakes are all in line for another row. He covers deep and scatters the kernels so that the stalks will be a few inches apart. If the roots are close together, the stalks lean apart and break down.

E. P. Church would put more seed upon rich land than upon poor. Thick seeding will cause the straw to be finer, and the grain will ripen earlier and evener. A poor soil cannot nourish a large crop. On dry ground more seed is necessary, as some is so near the surface that it fails to grow. He would harrow thoroughly, though it required more time. He used sixteen bushels of common potatoes in planting an acre with hills two by three feet.

N. H. Stiles said a neighbor sowed ten bushels of oats on an acre, with the expectation of one hundred bushels, but had a poor crop, the straw being fine and the heads short. Another man sowed seventy rods with oats that had been injured by heating, and probably not more than half a bushel grew. It was on new land and the yield was sixty-two bushels.

G. B. Brewster spoke of the importance of the proper preparation of the soil. His corn ground was ploughed last fall, but this spring he couldn't do a thing with a common harrow. He then took a cultivator that he uses in hoeing corn and hops and went over the piece till it was mellow.

J. B. Fassett sows grass seed with those kinds of grain that occupy the least ground, or better still with no grain. It is quite a loss to sow costly seed on land that is not sufficiently enriched and properly prepared to produce a crop. We ought to raise our seed.

Wm. L. Jameson agreed with Mr. F. that we should raise our own seed. By buying seed he got a bad weed upon his farm. Clover lasts well with him; has a piece in clover four years. He believes in heavy seeding. The man who cleared up Mr. Fassett's pasture sowed half a bushel of clover and timothy seed, and the result was an excellent pasture turf. He prefers to sow grass seed with barley, rye, or wheat, rather than with oats or India wheat, although he had had a good catch with the last grain.

Z. E. Jameson suggested the danger of going to extremes in the amount of seeding, and asked if one reason of the rank growth of grass around stones and logs might not be

found in the more ample room which the roots found under these stones and logs for expansion. An old field will produce fine grass because the plants have not room to grow large. If we spill grass seed upon the ground we expect fine straw and a feeble growth, and he thought that more hay is sometimes produced per acre from thin than from too heavy seeding. Farmers are generally of the opinion that the poaching of meadows by cattle is injurious, but one man told him this spring that he should expect his hay crop to be improved if the whole surface were covered with tracks not more than a hand's breadth apart.

E. P. Church said thick seeding makes short grass. His best piece last year was a thin growth. The amount of produce depends on the fertility of the ground.

J. B. Fasset inquired if two fine stalks are not better than one coarse one. His pasture had been referred to. It is the best pasture he ever saw; being all clover and timothy, with no foul grass. If you want good grass you must sow the seed. I sow half a bushel, but perhaps one bushel would be better.

G. B. Brewster thought coarse hay was poor stuff. When ripe, cattle won't eat it, as it is like clear wood. Put on more seed. One bushel, a mixture of clover and timothy, is little enough. Don't put it too deep. One-eighth of an inch on rich soil is deep enough. It will then branch out on top of the ground; but if buried an inch it comes up a feeble stalk. Grass in well-manured land will live, but in poor soil it will die.

One of the members of the club has several acres of low meadow, that is covered over with a pretty firm turf that produces a flat grass about eighteen inches high. He wishes to get it into English grass. How can it be done? The turf is so full of roots that it would be very hard to plough, and in some places it is so mucky that the team would mire?

REMARKS.—It will be noticed that in the above discussion none of the gentlemen except Mr. Fassett state the proportions of clover and timothy seed which they use. Are we to infer that they all recommend three pounds of clover with sixteen quarts of timothy?

The question of the member of the club who wishes to reclaim a wild meadow we hope will be answered by some one who has had practical experience in this work. We have tried it on a small scale in two ways. First by covering the whole surface with earth from the adjoining banks, to which compost was applied with the grass seed. This is apt to form a hard, tough sod, difficult to plough, and in other respects rather unsatisfactory in its operation. Our other plan was to dig ditches through the land sufficiently large and near enough together to cover the land with a good layer of muck, &c., thrown from the ditches. Then fill the ditches with stone, if handy, or gravel sand or earth, to within eight or ten inches of the surface, and finish off by filling up with the surface soil or muck. This raises the surface of the whole field, furnishes drains and operates well. How can such land be reclaimed with less labor?

COMBINATION OF WOOL BUYERS.

The absurdities of fashion and the force of habit are often cited as illustrations of the weakness of human reason. Precedents in legal proceedings and custom in commercial transactions must be observed, though the reasons for their establishment and the justice of their operation may in some cases be more than questionable. When coal is bought by the quantity, the dealers expect 2240 pounds for a ton; but when these same dealers distribute it to their customers a ton weighs only 2000 pounds. The advantages which accrue to the dealers from such "laws of trade" are very obvious, and are perhaps sufficient to entitle the efforts of wool buyers to establish and confirm their one-third shrinkage rule to more serious consideration than we have been disposed to believe they deserved.

We, therefore, ask the attention of our readers to the following remarks by Dr. Randall, suggested by a late article of ours upon this subject, a portion of which he copies into the *Rural New Yorker*, and then says:—

Our contemporary seems to suppose that the resolutions of the Woolen Manufacturers' Association of the Northwest, at Chicago, last February, and those passed at the New York State Convention of Buyers, at Rochester, last year, comprise all the public and combined action taken by the dealers to enforce their shrinkage rules. This is an error. The Ohio State Buyers' Association passed similar resolves last year, and has recently, in a State Convention, reaffirmed them. Various other State and local Associations have taken the same action,—but we have not preserved records of their places and times of meeting. The movement is general in the principal wool growing States,—nor has it been confined to mere words—"puffs of empty air," as the NEW ENGLAND FARMER elsewhere terms them. It is notorious that buyers, in all parts of the country, are attempting practically to carry out these "rules," and that they are rapidly becoming more fixed and peremptory in this—*alleging them to be the established*

regulations of the trade. We have made extensive recent inquiries on the subject, and regret to say that, in our opinion, there is no doubt that a large proportion, if not even a majority of growers, though protesting against the injustice of these arbitrary exactions, actually submitted to them in selling the clip of 1867.

Let our friend of the NEW ENGLAND FARMER make inquiries among the wool brokers and dealers at home, in Boston, and ascertain what proportion of *them* recognize and act on the one-third shrinkage rule, in their transactions in *domestic* wool. We suspect that he will find that nearly all of them practice the rule, and that they took the lead of the country dealers in the matter. As long ago as December, 1865, at the National Convention of Wool Growers and Manufacturers at Syracuse, Mr. Geo. W. Bond, one of the most eminent and well informed wool brokers in Boston, or in the United States, declared that "he understood that (the one-third shrinkage) rule commonly prevailed among the buyers and sellers of American unwashed wool—so much so, that in the absence of a contract, the rule would be understood to prevail as a matter of course." And how tenaciously Boston dealers are disposed to cling to the rule, and resent its infraction among themselves, may be inferred from the following fact. We recommended a Boston house, to which, on the supposition that it sold wool "on its merits," we had advised some lots of wool to be sent in 1867, to *advertise* that it would so sell in all cases; stating that by so doing it might confidently anticipate large consignments from the interior of New York. In reply, it solicited a favorable notice from us, (which it did not receive,) but declined to comply with our suggestion, on the ground that it might thus "incur the enmity of (wool) merchants!"

In view of the above facts, we confess it is impossible for us to regard the general combination among buyers and dealers—every day acquiring a more systematic organization, and every day adding new force and solidity to its rules by custom—as an evil which cannot longer be safely submitted to, or safely permitted to take its own course. Our writings on sheep husbandry, for the last twenty years, will show whether we ever have been either an alarmist or an agitator on this class of subjects. We have ever believed that the triumphs of peace, if attainable, are cheaper and better than those of war; and, as a general thing, we have believed them more attainable. We regard an internecine conflict between the different branches of the same general interest as especially deplorable. But when one branch of such an interest persists in disregarding common sense and common justice in its dealings with another branch, and, mistaking patience and moderation for approaching submission, arrogantly assumes that its will is the settled law in the premises—what remedy remains to the injured party but outspoken, energetic and *organized* resistance?

Some persons seem to suppose that inasmuch as "it takes two to make a bargain"—inasmuch as the buyer cannot enforce his rules on the seller without the consent of the latter—it is safe to leave the matter entirely to individual action. The history of the last two or three years teaches a different lesson. The buyers' rules have steadily spread wider in their field of operation and been more and more successfully enforced. What else could be expected, when they were supported and acted upon by a powerful and organized body of men, and met with no organized opposition? Was there not, ostensibly, even some ground for the pretence that they were "established laws of trade" when buyers' association after buyers' association substantially proclaimed them such, and the growers' associations generally remained silent on the subject? Was it to be anticipated that the scattered sellers—especially the small sellers, who in the aggregate grow most wool—would make an obstinate resistance, when they were not encouraged by their associations to do so, when they saw their neighbors giving way to the exaction, and when they were doubtless led to apprehend that they would lose the sale of their clips if they stood out? But if the same men learn that their neighbors and the wool growers of the country will stand by them; if they learn that their brethren, as a class, appeal to them to join, as a matter of duty and principle, in protecting the common rights—none but weak-kneed and milk-and-water men, or those who *must* sell on the first chance, from pecuniary necessity, will abandon the common cause.

We have spoken of growers' associations, in previous years, remaining silent on this topic. There has been at least one exception. The New York State Association—after inviting the State Buyers' Association to join in the deliberation—held a meeting on the subject of the "buyers' rules" at its Annual Fair at Auburn, in May, 1867. Not more than one member of the Buyers' Association attended. One manufacturer was present. After a full discussion, resolutions were unanimously passed setting forth the glaring injustice of "the rules," and of some other buyers' customs. But no recommendation was made in favor of a general and united defensive movement. It was then hoped that such steps would not be necessary. Many believed that the buyers' resolves, in their public meetings, were "puffs of empty air"—mere expressions of their *wishes*—and that such absurd and unjust regulations would not be insisted on in practice, at least by country buyers. And for reasons heretofore given by us, a confident expectation was entertained that the National Association of Wool Manufacturers would soon repudiate the obnoxious rules, and thus bring them into disrepute both among city and country dealers. Detesting anything savoring of

combination in the affairs of trade, unless rendered absolutely necessary in self-defence, the New York Growers' Association judged, and we believe wisely judged, that it was not expedient to resort even to defensive combination until the necessity should become palpable, imperative and apparent to all.

Another season has rolled by. The "sober thought" has brought no change in the action of the buyers. They are again fulminating and reiterating resolutions in favor of their odious and insulting rules. A majority of the individual clips of 1867 were, as already said, sold under those rules. And we learn from undoubted sources that a most decided effort will be made to enforce them universally in buying up the clip of 1868. We most sincerely believe, then, that the struggle cannot be safely put off longer. We believe that if the clip of 1868 is sold under "the rules," subsequent resistance will be rendered ten times as difficult, if not altogether unavailing We believe that such would be the deliberate and unanimous conclusion of every State growers' association if they were convened to obtain an expression on the subject. But the meetings of most of them will not be held before most of the new clip will probably be sold.

But individual growers *can* take the remedy into their own hands. They are called upon by every consideration of interest and of manhood to do so. Let every one remember that his own submission to the buyers' rules—even if he has not half a dozen fleeces to be affected by them—is an abandonment of the rights and interests of his class and is directly giving aid and comfort to those who are, in this matter, the enemies of his class.

CUTTING GRASS IN JUNE.

In answer to inquiries in reference to cutting hay in June, I would say that clover and herdsgrass do retain their vitality when cut thus early. I have continued the practice ten or twelve years, and find it a success. I commence haying about the 10th of June, and finish by the 25th, if I can, and then the second crop is ready to cut the last of July or first of August. If the weather is favorable, a third crop can be cut in September, and then a crop grows sufficiently to cover the grass roots, which serves as a coat of manure.

The great error in farmers is in letting their cattle go on their mowing ground for fall feed, and continuing to feed them until they are put up to hay for winter. In that way the grass roots are left so bare that the winter kills half of them; and that is not all,—the continued travel of the animals treading down the ground, is as great an injury as the feeding. For instance, take a road where the farmers cart their manure across the grass ground, and they find but a short crop in the road, while it is stout grass each side.

The practice of farmers from my boyhood up, is to stock their ground with grain. That practice with me is abandoned. I spread on a coat of manure after plowing, and harrow it in; then sow on five pecks of clover and herdsgrass, equal parts, per acre, and harrow it in well; then pick up the stones, if any, and cart them off, and roll it down, which gives a smooth bottom to mow. I plough and harrow in the manure in the fall if I can, which gives a chance to get the seed in earlier in spring. You can then cut about the 15th of July two tons of hay per acre, which will include some weeds, but the weeds are nice hay if cut at this time; and the first of September it cuts two tons more without any weeds, which is a nicer crop than the first.

Grass cut in this way dispenses with all meal and roots, as I will show on two ordinary cows, and quite undersized, which came in in February last, and have been fed on hay three times a day only, and nothing else, kept in a warm stable that does not freeze, and watered twice a day. They consume 20 lbs. of hay per day each, which makes it cost (at $20 per ton,) 20 cents a day each to feed them; and in return they make one and a half pounds of butter each, per day, which has been worth 50 cents per lb., and now 40c., which makes 60c per day for 20c. worth of hay to feed them. I will now state the growth of a pair of steers I sold two weeks ago. Their weight was 2610 lbs. at 24 months old, and they sold at $8 per cwt., live weight, which amounted to $208.80. I sold them on Tuesday, at 3 o'clock, P. M., and I was to keep them until Thursday. The buyer them came for them, and we weighed them again at 10 o'clock, and they stood 2630 —a gain of 20 lbs. in less than two days, which makes the growth five pounds each per day. This, Messrs. Editors, shows your readers the effects of cutting hay early. The steers have been fed same as the cows.—*A. Scott, Craftsbury, Vt., May* 17.—*Country Gentleman.*

Remarks.—Our cattle market reporter noticed the sale of these steers in his report of the market for April 29. They were regarded by both butchers and drovers as a very well fatted pair of steers for their age; but as they were fatted without grain, our reporter was a little curious to know how they dressed. He has since made inquiry of the purchaser, Mr. Holmes, of the Cape, as to their "proof," and has been informed by him that they dressed first rate,—even better than was anticipated from their outside appearance.

A Rock Maple was recently cut on the pasture of N. K. Abbott of West Concord, N. H., whose circumference, where chopped, was 14 feet 9 inches. It was at least 100 feet high, and had been tapped for sugaring 106 years.

WHITTEMORE'S SELF-LOCKING RAKE.

In the invention and construction of this rake, which was patented February 4, 1868, the proprietors have endeavored to remedy the imperfections and to avoid the objections which the operation of other horse rakes have suggested. By the simple but effective device of a "Lock Lever," the teeth can be held to the ground in heavy work, or raised just above the surface, so as to avoid scratching up manure or dirt while operating as an efficient gleaner. Among its other advantages are "clearers," which facilitate the emptying the rake and keep the windrow compact; its simplicity of construction and consequent ease of repair,—each tooth, being independent, can be replaced by another, if broken, in five minutes; its ease of operation,—being the easiest working rake in the market; its easy spring seat, which is secured to the axle so as to relieve the horse of the weight of the driver. It is furnished either with iron or steel teeth, and is manufactured by Whittemore, Belcher & Co., at Chicopee Falls, Mass., and is for sale by them at 34 Merchants' Row, Boston.

PLOUGHING UP OLD ORCHARDS.

A question frequently arises as to the best course to be pursued with an old neglected orchard, which has become covered with a dense sod of grass, and this often of an inferior character, and full of disagreeable weeds. Orchards that have been widely planted, and which have gaps from the decay of trees, especially when these have been trimmed up with high stems, and long naked branches, do not cast sufficient shade upon the ground to prevent the growth of grass and weeds. These intruders occupy the surface soil to the disadvantage of the roots of the fruit trees, and we may wonderfully improve the health of such orchards by ploughing the ground, and at the same time severely pruning the branches and cleaning the bark of these old trees. These good results may be continued by shallow culture of the soil, with suitable applications of manure where needed. By giving a dose of lime, or marl and ashes, new life, growth and productiveness will astonish and delight the orchardist, and reward him for his labor and his outlay. It may be urged as an objection to breaking up the sod, that the most careful ploughman will unavoidably damage some of the roots that approach the surface; but this is an injury that must be submitted to; and after all, it is not such a serious affair, and is overbalanced by the advantages of renewing the productiveness of the exhausted orchard. *Dr. Warder's American Pomology.*

TRANSFERRING BEES.—H. B. K. Kinmundy, Ill., wants to know the best or readiest way to transfer bees from old box hives to new and improved ones. We know of no better way than that recommended by Langstroth in his treatise on the honey bee. When a colony is to be transferred, a box sufficiently large to hold the swarm is provided and placed on the top of the hive to be vacated, with an aperture for the admission of the bees into it. This done, the entrance holes of the old hive are closed and the sides rapped upon smartly with a stick. This continued for a while will cause the bees to escape up through an opening in the hive to the extra box, where they

can be secured for the time being. When they are out, sufficient store and brood comb for the colony may be cut from the old hive and fastened in the new one in such a manner as to keep it in place till the bees can have time to attach it permanently to the movable frames. This done, the new hive is placed in the position on the stand occupied by the old one, and the bees in the box turned down in front of it to seek their new home. This they will generally do without much remonstrance, and the work of accumulation and propagation will go on as though the processes had suffered no interruption by the transference from one domicil to another.—*Rural New Yorker.*

EXTRACTS AND REPLIES.

ASHES, SOOT, AND SALT FOR STOCK.

I have often thought I would give you a line of my experience with farm stock,—working horses in particular. My first care is to feed my horses as regularly as possible, and then have them worked with moderation. Twice or three times a week I give them salt; nearly always using a small portion of ashes, soot or lime with the salt. While I have done this I have no recollection of ever being troubled with bots or other sickness among my horses. But in other years, when this was neglected, from absence or otherwise, I have been troubled with sick horses, and have had some die. Once or twice a month I give a similar mixture to my cows and oxen.

When warm weather commences in the spring, I mix a teaspoonful or more of sulphur, and the same of saltpetre with the salt for each of my young cattle, and they generally shed their old coats, start their new ones and begin to fatten earlier than my neighbors' stock not so treated. Ashes or soot with salt I also think is good for sheep and hogs.

As far as my observation has extended, the man that is careful of his stock, or in his farming, or in any other avocation, is almost certain to succeed, while the careless fail.

I have always thought that a good agricultural paper was one of the best helps to the farmer. A single idea found there is often of more value to him than the price of the paper a whole year.

West Virginia, June, 1868. J. H. R.

REMARKS.—The above hints were written by a gentleman who was born and has always lived south of Mason and Dixon's line. We solicit a continuation of our correspondent's practical suggestions.

SALTING COWS.

In the Monthly FARMER for October last, page 465, in a discussion on the subject of the dairy at a convention in Elgin, Ill., Mr. J. M. Treadwell is reported to have said that he "salts cows every five days in summer; after salting, the milk increases from two to five gallons; cows will not eat salt much oftener than once in four days." One may perform a particular act daily, semi-weekly or weekly with some degree of regularity; but to shave one's face, wind up the clock, salt the cows, or anything the "like o' that," once in *five* days, with any degree of regularity would require, I should think, an extraordinary memory. So far as my observation extends, cows will almost always eat a little salt every day, if they can get it. Civilized men eat salt, in some shape, at almost every meal. It is said that prisoners deprived of salt cannot remain healthy. Is it not better, then, to offer cows salt every day, or, what is perhaps still better, give them access to it whenever they choose, and let them follow their own instincts? It is said that some who sell milk mix salt with the food which they give their cows, in larger quantities than they would naturally eat, for the sake of increasing the quantity of milk. This I regard as an immorality, being a violation of law, both natural and moral. The milk must be of a poorer quality, and the cows less healthy. What Mr. Treadwell means by saying that "after salting, the milk increases from two to five gallons, I do not know. That he should get five gallons instead of two seems incredible. Substituting *per cent.* for *gallons*, the meaning would seem less extravagant. In either case, if salting once in five days would produce any increase of milk, I think that salting every day would produce a still greater increase.

Derry, N. H., May, 1868. E. B.

REMARKS.—Mr. Treadwell was speaking of the management of his whole herd, and of his manner of treating the milk from all his cows, and we understood the gain of two to five gallons was on the whole daily produce. The number of cows kept by him was not stated, but from the fact that he had been in the business of sending milk to Chicago for ten years, and from our knowledge of the grand scale on which Western farmers conduct operations, we presume that his number of cows was pretty large.

WINDMILLS FOR PUMPING WATER.

Can you, Mr. Editor, or some of your correspondents give us a plan for pumping water for a stock of cattle, and for the use of the family in the house, by the aid of a cheap windmill. Many wells might perhaps be exhausted, as the wind blows a great share of the time enough to turn a small windmill, but why not have a pipe to return the surplus water to the well. It appears to me that if something of the kind could be got up at small expense it would save a great deal of labor.

Would it do to build a cistern under ground in land that is elevated above the buildings, and convey it in pipes to the house and barn?

Northboro', Mass., Feb. 3, 1868. C. EAMES.

TO SAVE LABOR IN HOEING POTATOES.

Last year I planted two acres of potatoes, the hills three feet apart each way, the rows at right angles so I could run the cultivator two ways. I used a shovel plough which hilled them up just right, and in one day went over the piece both ways; then after a few days went through in one direction only. That was all the labor I expended upon them between planting and digging. The result was a crop of 300 bushels. This year I have planted the same ground in the same way, and do not intend to hoe them, and expect a better crop, as I put on plaster last year and manure this. I also kept a cosset sheep in my potato field, and I believe it is true that sheep will not eat growing potatoes. I shall keep two or three sheep among them this year to crop any weeds that grow.

KEEPING DIFFERENT BREEDS OF SHEEP TOGETHER.

An item has gone the round that English sheep would not thrive when kept among Spanish Merinoes. I have kept full blood Cotswold, South Down and Spanish Merino lambs together all winter, and they have all done well. They ate grain out of the same dish, and drank together without the least apparent reluctance. The Cots-

wold kept fat all winter. I do not know the exact weight of the different animals, but I judge the Cotswold to be three times as heavy as the merino, and twice as heavy as the South Down. A writer in the *Stock Journal* says cows will not eat after sheep. That's bosh. They clean out sheep racks with the greatest eagerness, and pick up hay that has been trampled by sheep, and graze in the same pastures. Z. E. JAMESON.

Irasburg, Vt., June 1, 1868.

WOOD'S GOLD PRIZE MOWER.

American farmers have reason to be proud of the honor achieved by the agricultural implements exhibited and tested at the late World's Fair, at Paris, because their liberal patronage of our mechanics created that necessity which was the mother of all these inventions. The above cut represents the mowing machine which took the Grand Gold Medal, and the Decoration of the Imperial Cross of the Legion of Honor, on that occasion, as well as First Premiums at the State Fairs of Vermont and New Hampshire, and numerous county Fairs. It is manufactured only at Hoosick Falls, N. Y., where we understand over one hundred are made per day. This machine is for sale by Whittemore, Belcher & Co., Boston.

FARMER'S GIRLS.

I was glad to see that "One of the Boys" had confidence enough to write a few lines in answer to the complaint about boys leaving the farm, and that you had the fairness to publish them. Cannot he, or some one of the other boys, say a word for the girls, who are about as much censured in this respect as themselves? Our school books tell us that effects are the results of causes. What then are the causes of this general dissatisfaction of the young people? Girls as well as boys are pleased with a sense of responsibility. This is thrown upon us in school. We are required to demonstrate problems, to write compositions, and to give a reason for every operation we perform. In old times the dignity of responsibility was felt by the girls who were required to spin a given number of skeins per day, and then perhaps to weave a web of her own. But now household duties are so narrowed down that some mothers find little for their daughters to do on their own hook, and fret and complain because they *help* them so little. If we go to the factory, we have tasks of our own—the charge of one or more looms, or some other department,—and are responsible for our work; if we teach school, the committee speak of it as Miss So-and-so's school. But how is it with those of us who are blamed for not staying at home to *help* mother? Have we the responsibility necessary to excite ambition? Whether these thoughts of one of the girls are worth the notice of editors or mothers is not for me to decide, and I therefore bid you good evening.

New Hampshire, May, 1868. ANNIE.

REMARKS.—"Man never is but always to be blest" can be truthfully said, we suppose, of girls and boys as well as of "man;" of city as well as of country people; of the trades and professions as well as of farmers. Is it wise, therefore, dear Annie, to blame the farm, the farm-house, or any of our outward circumstances for the "aching voids," or the restless discontents, which spring from within? Do you expect *ever* to be contented?

TIME AND MODE OF HAY MAKING.

The readers of the FARMER cannot well overlook your editorial, May 30th, on the subject of "Early making the hay." The subject is well elaborated, and carries with it the most convincing facts. That too much grass stands till it is overripe and becomes tough, wiry and woody, every farmer that feeds his stock will admit. The teeth and stomach of the animals are severely tested; the nourishing, fattening properties are lost, and the milk pail fails to show a "good mess."

The shortest possible time for curing hay is the rule on this island. Unless the grass is very green and heavy, or a very poor "hay day," by plying the tedder freely hay is generally "barned" the day it is cut, unless it may have been mowed the evening previous. Farmers here say it is far better, sweeter and more tender when thus hayed, and that hay is generally dried too much, and that farmers have too much fear of must.

Your correspondent, Asa G. Sheldon, in a communication in the Monthly FARMER, for 1867, page 417, favors late cutting and more thorough drying, and suggests imperfectly cured hay as a cause of abortion in cows; but I think that farmers generally are now satisfied that much has been lost by letting the grass get too ripe, and by exposing it to too much drying after it is cut, and I cannot but thank the NEW ENGLAND FARMER for this instructive article, and feel that every farmer who reads it will be instructed, and will adopt and accept the general principles as sound in every particular. It will cost no time to test it, nor money to try the experiment suggested.

Brooklyn, L. I., June 3, 1868. HENRY POOR.

GREEN CURRANT WORM.

Will you please inform me, through the columns of your paper, in the "Extracts and Replies," a remedy for those small green worms that infest currant bushes. They will completely strip the bush in a short time. NICKERBOCKER.

Orwell, Vt., June 2, 1868.

REMARKS.—Having great faith in manual labor, our first recommendation is hand picking. Turn over the leaves and destroy the eggs. But if too late for that, dust the plants and worms with white hellebore, which is somewhat costly and may be reduced by the addition of flour, well mixed, or try equal parts of plaster, wood ashes and lime, which is said to be effectual, and much cheaper.

COARSE WOOL SHEEP AND LAMBS.

As I have occasionally seen lamb stories in the FARMER, permit me to say that I have a little flock of ten coarse wool sheep followed by eighteen lambs. One of my sheep has three lambs, which at three weeks old, and before going to grass or

having any feed except what they obtained from their dam, weighed respectively 13½, 15½ and 16 pounds,—in all 45 pounds. A. J. MORSE.
Fayetteville, Vt., June, 1868.

AGRICULTURAL ITEMS.

—"One year's seeding
Makes seven years' weeding."

—A correspondent of the *Country Gentleman* says the Germans are rapidly settling in Illinois, and he predicts that in twenty years they will have full possession of the central part of that State.

—A correspondent of the *Country Gentleman* obtained an abundant crop of plums from some trees in which portions of the offal of a pig were hung, while the fruit on trees in a henyard were all destroyed.

—In England and France, dried fern leaves are used very extensively for packing fresh fruit, grapes especially; they seeming to possess to an unusual degree the property of preserving vegetable and even animal substances for a long time.

—It is said that a handful of oil meal in a hill of corn, will occupy the cut worms, till the kernel is decayed, and no longer liable to be injured by them. As a manure it is worth about as much as guano, so that where cut worms abound, it will pay to use it freely.

—Grafton and Coos counties, N. H., have at least forty starch mills, twenty mills in each county. Each of these mills turns out fifty tons of prime starch annually, worth $150 per ton. Five hundred thousand bushels of potatoes are annually manufactured into 2000 tons of starch, which is sold for the round sum of $300,000.

—A correspondent of the *Valley Farmer* saw iron ox-bows at use at the navy-yard in Philadelphia, found the teamsters approved of them, went home and for eight years used none but iron. He used a three-fourths inch rod of round iron with screws on the ends with a nut three by two inches. With a one-and-a-half inch hole required by wood bows, the yoke is much more weakened than by those of only three-fourths inch for iron.

—A correspondent of the *Western Rural* says that when he perceives his horses inclined to rub their manes and tails he feeds them a little oil-meal, say from one to two quarts a day for a week or ten days, and at the same time makes a good brine, as warm as he can bear his hand in it, and washes the scaly substances out of the mane and tail, and mixes about a tablespoonful of lard to a teaspoonful of powder, and rubs it in well about the roots of the mane and tail.

—The *Ohio Farmer* objects to plugging maple trees as recommended by our correspondent "W. V. H.," and says: By leaving the hole open the sap of the tree forms a cambium or jelly on the wound which becomes a new bark and under this protection new wood is formed and in a healthy tree the hole gradually closes up; whereas, if a wooden plug is driven in the sap keeps the plug moist, no bark can form on the lips of the wound and the hole is more likely to rot than to heal up.

—A correspondent of the *Prairie Farmer* says that the past winter has been unusually severe on grape vines in Iowa. It is estimated that fully one-half of the vines in the county of Benton, are dead. He ascribes this to shallow planting, by which the buds start prematurely in the spring and are destroyed by frost. His own vines, with the crown about one foot below the surface, have escaped injury. He is not sure that this plan would answer in other climates and in heavier soils.

—C. L. Hoyt, President of the Potter County, Pa., Agricultural Society, and probably a pretty sharp man generally, writes to the *Rural New Yorker* that he will warrant the following to be an infallible cure for hoof rot in any flock of sheep in America:

Perseverance	500 lbs.
Jack knife	100 "
Blue vitriol (pulverized)	3 "
Spirits turpentine	¼ pint.

Apply the latter to keep away the flies.

—Mr. Vanmeter, of Salem, New Jersey, says, "Most of our farms along the Delaware river and inland creeks, have meadows. Some of these meadows are classed as number one for grazing purposes. The portions called inferior are noted for producing herdsgrass. The cattle will not eat the hay; it is thrown after threshing into the barn yard for manure; but the seed is in great demand, worth at the present time $1.50 per bushel. Some farmers the past season have received from $1000 to $3000 for the seed, according to the number of acres in meadow." Here is proof of the importance of cutting herdsgrass early for hay. If allowed to ripen its seed, it is nearly worthless for hay.

—A German horticulturist recommends the following method to cover a steep bank with grass. For each square rod to be planted, take half a pound of lawn grass seed, and mix it intimately and thoroughly with about six cubic feet of good dry garden earth and loam. This is placed in a tub, and to it liquid manure, diluted with about two-thirds of water, is added, and well stirred in, so as to bring the whole to the consistency of mortar. The slope is to be cleaned off and made perfectly smooth, and then well watered, after which the paste just mentioned is to be applied with a trowel, and made as even and thin as possible. Should it crack by exposure to the air, it is to be again watered and smoothed up, day by day, until the grass makes its appearance, which will be in eight to fourteen days, and the whole declivity will soon be covered by a close carpet of green.

A SELF-REGULATING WINDMILL, called the "Sancho Panza," was recently exhibited at New York, which attracted considerable attention.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

[NOTE.—The desire to impart such information as should save the young house-keeper much perplexity and hard and unpleasant labor, to show her how to economise her time and her resources, and to help her to introduce among ordinary household duties such occupations as should furnish both her and her children with subjects for high thought and profitable conversation, was the motive which first led to the preparation of these articles on Domestic Economy. And it has been, and still will be, the aim of the author to lighten, to cheer, and to ennoble the life of the housewife and mother. This statement seems called for because she finds that in her anxiety to meet all the wants of the most inexperienced she has touched upon so many points that her motives have been misunderstood, and by some readers she has been credited with the very opposite of her aims and intentions.]

CHAPTER XII.

WOMAN'S WORK AMONG GARDEN FLOWERS.

It may be necessary to devote the larger portion of your land to vegetables, hence I have spoken of those first, but even if that is the case, you can manage to have a few flowers; when fruit trees and vegetables are arranged with taste there is always room somewhere to set two or three bulbs, or to plant half a dozen seeds, that will lend a good deal of beauty to the kitchen garden. Still, on many accounts, it is better to spare a little spot for their especial use, and you can lay out your ground so that it shall be in the centre; there you will be sure that tender plants are well sheltered by the stronger and coarser growth of the trees and vegetables. To this, a walk from the house should lead, bordered by ornamental trees and flowering shrubs, or the hardier flowers of low growth and such bulbs as need to be taken up in the fall. But the best plan is to set apart a plot for flowers alone; and this should be where a good view of it can be had from the windows of the house. It is also pleasant to give others the benefit of its beauty and fragrance; so let it be as near the street as you can. A great annoyance to house-keepers is the dust that rises from open ground, which, when there is the least air stirring, rushes directly in at the doors and windows; because of this, the mould immediately surrounding a house should be turfed. In this may be set trees, vines and shrubs, and such bulbs as seldom need removal; the turf upon their roots should be laid back every spring while a dressing is applied to the soil, and then replaced. Thus treated, this land and that of small front yards gives a much better appearance to the house, as well as saves the owner more trouble, than the usual fashion of devoting it to the culture of such plants as require a bare soil.

If your flower garden needs a screen from the street, or the northern or easterly winds, see that you have a good fence, upon or against which vines and tall shrubs may be made to lean; or else set a hedge. For this, the hawthorn, with its beautiful white or red blossoms, is desirable; but it grows slowly and requires a dry soil. The buckthorn will flourish almost anywhere, and grows rapidly. If these are raised from seed, sow them in the autumn; but getting young plants from some nursery is a more satisfactory way of starting it. Set plants for hedges in May; after the second year, trim and head them every August. The lilac makes a good hedge if allowed to throw up suckers. This, as well as the buckthorn, needs much trimming and frequent "heading in" to form a thick screen. The arbor vitæ, raised from cuttings, makes an excellent hedge, neat and durable. I once saw a beautiful hedge planted by Nature's hand, but kept in order by man. There were plants of various form and foliage, blooming each in its season,—the shad-bush, bird-cherry, elder, wild-rose, blackberry, raspberry, hardhack, meadow-sweet, golden-rod, and aster. Such hedges cost nothing, require very little care—only to be kept tidy—and are an ornament to any ground; it is a pity that they are so often destroyed.

The boys of the family will like to help make the beds and walks, and to keep the walks in order. It is a good plan to give older children beds to cultivate for themselves; they thus have a particular interest in the general concerns of the garden. Assist them in the choice of flowers, and in their arrangement. Some children find a great deal of amusement in planting seeds in fanciful figures, and letters and words, and will work hard in order to keep the device looking well. If they have a taste that way, indulge them in it; and point out to them the wonderful varieties of foliage and form; teach them to notice the delicate shadings and textures. By these means they will acquire habits of attention and observation,—their taste for the beautiful will be developed and cultivated; and they will very soon learn to find more enjoyment in gardening than in rough sports, or in lounging; the most heedless will grow thoughtful, and those of coarse and wild manners become refined and gentle.

The form and size of your flower beds depend in a great measure upon the shape of your plot, but circular or oval beds or rings, with a few of an oblong, or a crescent shape, to give variety, are most easily laid out by women, and have a good effect if rightly filled. Directions for making these have been given. They should be edged either with turf or low, close-growing plants or strips of

board. The dwarf box is the most common and the best edging, and being an evergreen gives a lively appearance to the garden when no flowers are in bloom. It is raised from cuttings or division of the root. Set them about four inches apart, trim them the next year, and every year, in June; they should never be higher than four or five inches. When they are too thick take up the plants and divide them. The dwarf pink, if kept neatly in its place, and covered with dead leaves in the winter is quite pretty for this purpose. Also the thrift and the chamomile. The walks of a flower garden should be three feet wide, at least, and kept dry, clean, and solid, in all weathers. If of gravel, a little added every spring and well rolled, they will generally be in good condition. Fine cinders sifted from coal ashes make a very good walk. Still, a much better plan is to have all the space between flower beds turfed, and the grass often cut and rolled; this velvety greenness will give a more vivid aspect to the view, and bring out in strong relief the colors of the flowers.

Set plants of tallest growth and most showy foliage and blossoming at the farthest point of view; as a general rule they should never be in such quantity among less conspicuous objects as to attract all the attention. In arranging flowers in groups place the largest and tallest in the centre, those of light and waving foliage for the outline of the group, those of heavier and prim habit within, and dispose all beds and groups with reference to the general effect—none should hide or overpower others. Also, in designing these groups or beds see that care be taken to bring together only those colors that contrast well, either with themselves when arranged in "ribbon" form, or, when of one color, with that of the adjacent groups. Never set or plant flowers in beds or rows promiscuously as to colors or forms—there must be harmony in both to give pleasure to the eye. For annuals, the "ribbon" style is very pretty: the seeds are sown, or the young plants set, in circles, one within another, so that when in bloom the bed presents a red, a white, a blue, and a yellow ring. An elegant contrast is afforded by white and red alone, purple and yellow, blue and white, or each of these in one large mass of color, when the beds are surrounded by greenery—are set in the turf of a lawn, and kept distinct. You should also provide for a succession of flowers in your beds, so that when one set have lost their beauty there shall be others just ready to show their colors. The prevailing hue of spring blossoms is white; of summer, red; of autumn, yellow; and in your choice see that you have enough of other tints to harmonize well with them; yellow is so "overpowering," as some persons say, you should never admit much of it into a garden, or into a bouquet.

Set shrubs in cloudy, damp weather; early in October is the best time, but May will answer with all except those of the earliest blooming. Give them plenty of room and a good deal of loose soil about their roots; water them then, and, unless it rains, every day for a week. Every three years they should taken up, their roots divided and reset. Bulbous and tuberous plants, if raised from seed, should be planted in pots or boxes as soon as the seed is ripe, and these boxes kept dry in a warm, dry cellar through the winter. Set the boxes out of doors the next summer, the following winter in the cellar again; in spring they may be placed in the garden and will probably bloom. Lilies, most irises, crocuses, tulips, and some kinds of narcissi, may remain in the soil through the winter—also snowdrops and some hyacinths. The gladiolus, tigridia, and dahlia, all need to be taken up in the fall. The bulbs should be dried; the dahlia tubers washed first, and then spread in boxes, or on shelves, in the cellar, where they will not freeze nor yet be very dry; if heaped together they will be liable to decay. In April throw sand or soil into the boxes sufficient to cover the tubers, and keep the boxes in a warm room, or out-of-doors, in the sun, during the daytime, till they sprout. Then divide the tubers, set in very rich soil, one foot deep, two feet apart; place a tall stake at each root, to which tie the plant when a foot high; water frequently with a liquid preparation of hen-guano and charcoal-dust. Keep tigridia bulbs in sawdust through the winter,—dahlias also keep well in sawdust,—where they will not freeze. Set them in May in rich soil, two inches deep, one foot apart. The old-fashioned and more hardy kinds of the gladiolus are left in the ground by some persons and covered with dead leaves. The choice varieties must be taken up before the frost comes. Dry them, and keep them in a warm, dry cellar. They need a sandy loam enriched with leaf mould. Set them in this late in the spring—after all your other bulbs are taken care of—between two and three inches deep, a foot apart; at the same time give each bulb a rod or slender stick, and tie the stalk to this as it gets high enough. Choice irises should have a similar soil and be cared for through the winter in the same way; also choice tulips and hyacinths.

To have annual flowers early, make a bed of light, rich earth in a sheltered, sunny situation, in October, and in this plant your seeds—each sort having a wooden label set with it. Cover the bed with boards until April; then remove the cover,—at night spread a mat over them until there is no danger from frost. Transplant them to your beds when they have their second leaves. If you have a hot bed for vegetables prepare one also for flowers, but use a cloth screen or cover rather than a sash. A good way is to fill flat boxes about three or four inches deep with well-mixed sand and loam, and raise them in this in the house. In March, warm the soil, in the stove oven, and then plant your seeds. Keep the boxes where it is light and warm till they are up, then give them sunshine. Accustom them gradually to the out-of-door

air by setting out the box at noon every fair day after the middle of April. Always take a damp, cloudy day to transplant, and shade the young plants for several days by spreading newspapers or cloth screens or baskets over them during the greatest heat. To sow seeds: level and press the soil of the bed with the back of the spade, a shingle, an old flatiron, anything of light weight and smooth face; mix fine seeds with sand and then scatter them upon this surface; sift a very little loam and sand mixed over them, and if the weather is dry and windy keep them covered with papers, kept in place by large stones, or with cloth screens, for some days,—don't sow on a windy day. The larger seeds may be covered a third of an inch deep, with the sand and loam; such as petunias, portulacas, poppies, need no cover. Wherever seed is planted set a label. When the plants have their second leaves thin them out—be sure to allow them room enough; when full grown no plant should touch its neighbor.

A rustic seat, an arbor, or a summer house, are attractive objects in a garden. Very elegant and expensive ones are too often seen. Simpler structures are generally more appropriate, (any man or large boy can make some sort of a substantial frame from strips of board, laths, or the branches of trees,) which when ingeniously covered by training vines over them are very handsome. These should not obtrude upon the sight, yet not be hidden entirely from view, and will afford delightful retreats for those who enjoy the quiet contemplation of Nature.

A rockery, for the growth of such plants as love the shade and need little soil, is in its way very beautiful. If you can spare three or four square yards of land in a sequestered spot, —or, you can make it so by setting trees in its vicinity,—collect there all the rocks and large stones that cultivation throws out of your ground; and procure others from the roads and pastures, of all sizes and shapes, from the biggest and roughest rocks to pebbles. Dispose them in hillocks, mounds, or grottoes—any way to look picturesque—with soil around and upon them, some half hidden, others lying nearly bare. And in the interstices and crevices set ferns and mosses and young junipers; pines, or hemlocks; roots of the partridge berry, winter-green, ground-ivy, violets, anemones, hepaticas, houstania, saxifrage, straw-bells, columbines, the trailing arbutus, wild geraniums, trefoils, crowfoots—any, or all of these wild flowers; and then among them, in pots hidden by moss, or in some richer, deeper portion of the soil, verbenas, of various colors—to be taken into the house before winter; also ivies and nummularia, the same.

This little picture of forest life you and your children can make upon three or four yards of ground, but ten or twelve will of course be better, and such work is a source of endless delight.

Now for our flowers. The list however must be short and our notice of them brief. Among shrubs you will first look for Roses. These we can have of all colors except blue; and of numberless kinds, from the tiny Burgundy, only a foot high, with blossom scarcely an inch in diameter, to the Queen of the Prairies climbing to the chimney-top of a cottage with its heavy clusters of flowers each over six inches in circumference; but don't forget the sweet-briar, with its deliciously fragrant foliage, if it a wilding; nor yet its aristocratic cousin, the moss-rose, the loveliest of all. Roses need a deep, rich soil, but dry; they do better when not exposed to the full heat of the sun, and they want a plenty of room. They are increased by layers, or division of the root. Start them in the autumn. The more tender kinds need a covering of mats or straw tied about them through the winter.

Of early spring shrubs we have the wild *Rhodora canadensis*, with its crimson flowers before the leaves, in May. Take it, with the bog earth upon its roots, from the meadows, in the autumn. Then come the Rhododendron of the gardens, with its pink shaded blossoms,—it needs a light, rich soil, rather moist, and flourishes best in sheltered situations; the double-flowering cherry and peach,—these are trees, but exceedingly beautiful for the flower-garden, as also the Siberian crab-apple; the *Cydonia Japonica*—the Japan quince—with its glowing scarlet flowers; the *Diervilla rosea*—generally called Wiegela; the *Amygdalus nana*—Dwarf Flowering Almond—covered with tiny pink blossoms like roses. Then the *Philadelphus grandiflorus*—Mock Orange—and its sister, *P. coronarius*—the Syringa; *Viburnum opulus*—the Snow ball, or Guelder Rose;—these with white flowers. *Kerria Japonica*, or *Corchorus*, yellow flowers; *Ribes aureum*—Missouri Currant, yellow also. *Syringa Persica*—the Persian Lilac—and *S. vulgaris*—the common Lilac—white and purple; *Peonia moutan*—the tree Peony—red, purple or lilac, and *P. papaveracea*—the Poppy-flowered Tree Peony—white flowers. Then *Lonicera Tartarica*—Tartarian Honeysuckle—pink and white; *Deutzia scabra*—white; *Althea* or Tree Hibiscus—white, pink, and purple; the Jasmine with its white, yellow and purple stars. All are easily raised from cuttings or layers in good garden soil. Like roses, they should be divided and new soil given them every three years. The *Euonymus Americanus*, Burning Bush, or Strawberry Tree—with red berries, *Symphoricarpus racemosus*, the Snowberry—white berries, from seed, layers, or suckers,—the same cultivation.

Of Lilies: earliest in the spring, *Convallaria majalis*, Lily of the Valley, needing a shady, damp situation; latest, in the autumn, *Funkia sub-cordata*, the white Day Lily, *F. ovata*, blue Day Lily. In June the yellow and the copper-colored. But far above all others, stands the white lily of summer, *Lilium Candidum*; in beauty and fragrance, the chief. These need a sandy soil well mixed with leaf mould. Raise lilies from bulbs, set early in Sep-

tember, three or four together, three or four inches deep. It is a good plan to cover them for the winter with stable litter or decayed leaves. Of wild lilies, *L. Canadense* and *L. Philadelphicum*, summer lilies; treat as the others, bringing them in autumn from the pastures. *L. Speciosum*—The Japan Lily, is very elegant. It is said to be hardy as our common lilies.

Of herbaceous perennials: *Peonia officinalis*,—the common peony, *Dielytra spectabalis* (called by some *Dicentra*), *Polygonatum multiflorum*—Solomon's Seal; all the varieties of *Lychnis*, with elegant red, or white flowers; *Phlox*, early and late; *Polyanthus*, the *Lobelias*, the *Spireas*, *Dianthus;* Pinks—Sweet William, *Campanula*—the Bell-flowers, *Althea*—the Hollyhocks, *Mathiola*, Stocks, gilliflowers, *Digitalis*—Fox glove, *Delphinus*—Larkspurs, *Achillea*—Rose yarrow, *Antirrhinum*—Snapdragon, *Trollius*—Globe Flower—English Butter cup, *Ranunculus*—Double butter cup, *Lunaria*—Honesty-flower, *Tradescantia*—the Spiderwort, *Aconitum*—Monk's-hood, *Aquilegia*—columbine; and Violets and Pansies. These will all flourish in good light soil. When raised from seed they seldom bloom till the second year. They may be propagated by cuttings, or dividing the roots.

Of annuals: Sweet Alyssum, *Amaranthus*—Prince's Feather, and Love-lies bleeding, *Celosia*—Cock's-comb; Asters, *Callistephus*—China and German Asters, *Centaurea*, Bachelor's Button, *Clarkia*, *Coreopsis*, *Datura*, *Escholtzia*, *Hibiscus*—Rose Mallow, *Iberis*—Candy tuft, *Impatiens*—Balsam, *Lavatera*, *Lupin*, *Mimosa*, *Mirabilis*—Four o'clock—Marvel of Peru, *Nigella*—Love-in-a-mist—Jack in the Bush, *Portulaca*, *Petunia*, *Reseda Odorata*—Mignonette, *Scabiosa*—Mourning Bride, *Silene*—Catchfly, *Calendula*—Pot Marigold, *Tagetes*—French Marigold, and African do, *Papaver*—Poppy, and *Zinnia*—Old maids. Annuals for winter boquets: *Briza*—Quaking Grass, *Gomphrena*—Globe Amaranth, *Helichrysum*—Golden Eternal, *Helipterum*—Dwarf Everlasting Flower, *Rhodanthe* and *Acroclinium*. These last need to be gathered when in full bloom and hung up loosely in the shade to dry. The seeds of the Globe Amaranth should be removed from their downy covering—pick it off with a pin carefully, or soak them a day before planting; mix them with sand for sowing.

Though most of these are exotics they flourish well in our climate, and are generally known; their seeds or roots may be obtained at any of the seed-stores. After your first planting raise what you need for the future. Tie a label to the first three or four good blossoms of the strongest plants, see that no injury befalls them, and as soon as the seed is dry let the children make little paper bags to put it in, and keep these in a cool, dry place till time for sowing.

Double flowers are apt to return to their original single form; this may be prevented in compound flowers,—as the marigolds, zinnias and asters,—by saving only the seeds from the outer rows of the calyx—those perfected by the florets of the ray, (the border of the blossom.) Grafted roses are also liable to lose their borrowed beauties; and bulbs—tulips, especially—often produce flowers which vary both in form and color from those of whose roots they are off-sets. This is sometimes owing to too cold, too rich or too moist a soil; very damp, rich mould gives luxuriant foliage at the expense of flowers; the brightest hued blossoms spring from a sandy soil in a hot open atmosphere.

A few words may as well be said in this connection as any where, in regard to rose and poppy leaves. Don't waste any of these,—even after the flowers have been used in vases, the petals are worth saving; but a better way is to gather them just before they are ready to separate from the calyx, early in the morning—while the dew is on them—and then spread them on clean cloths or papers in the shade to dry. Poppy leaves are of great use in medicine; rose leaves, not only in medicine, but in cookery,—house-keepers should never be without them.

By referring to the chapters on House Plants, published several months since, it will be seen that many of those are occupants of the garden, and add much to its beauty during the summer. There are many handsome annuals which may be planted for winter growth in the parlor,—sometimes they are changed to perennials by so doing. Among these are the morning-glory and the nasturtium for vines; the larkspurs, candy-tuft, asters, coreopsis, and zinnias for house-shrubs. There are also many wild flowers, besides those already mentioned, which deserve a place in the garden,—some of them in the parlor, too,—and persons who live in the country may not only find much enjoyment in transplanting them to their grounds and developing and enhancing their individual qualities by culture, but by such service very probably bring valuable plants to notice, and thus contribute the best of aid to the science of floriculture;—don't forget that many of our finest plants were once insignificant wild flowers, and do all that you can to improve and increase Flora's treasures,—for her beautiful gifts, scattered through the world, have a wonderful power in civilizing and uplifting mankind.

For the New England Farmer.

VERBENAS---QUERY.

I frequently see inquiries in the FARMER about plants; and I cultivate a few, usually with good success. I have a beautiful white verbena, which assumes a very sickly appearance lately. The foliage is covered with a mildew—leaves look white—and a petunia beside it seems to have caught the same infection. Now what can be the cause? I have tried several remedies, but still it grows worse. Now as we think the FARMER, or its editors, know most everything, will you please

tell the cause and remedy, and much oblige a careful reader of your valuable paper for twelve years?

Acworth, N. H., May, 1868. H. W. C.

REMARKS.—Without seeing your plant it would be rather difficult to answer the question. The verbena is generally considered a difficult plant to keep in good health through the winter. It is very apt to be troubled with insects or mildew, and die off. Breck, in his "Book of Fowers" says:—

"The verbena is kept with difficulty through the winter, except in the green-house or in warm rooms; unless kept growing, it will perish. It cannot therefore be kept even in a dry cellar, and it is not hardy enough to stand the winter. Most of the varieties are easily raised from cuttings, and can be purchased at so small a price from florists, that it is by far the more economical to buy a few dozen in the spring than attempt to keep them through the winter.

We think the great trouble with your plant is that it has been kept in the house too long. Set it it out in your garden, and it may recover. ED.

HOUSEHOLD ECONOMY.

CONTRIBUTED FOR THE NEW ENGLAND FARMER.

MR. EDITOR:—I have read the receipts in your paper, but do not recollect that any describe the Vermont mode of making milk emptyings bread. Perhaps the receipt may be acceptable to some of the readers of the FARMER.

Emptyings.

Take a cup of warm sweet milk, add one cup boiling hot water, a little salt, flour enough to make a thin batter, and set the mixture in a warm place to rise, two table spoons of flour added after the lapse of two hours will help it to rise.

The Bread.

When the emptyings have risen, warm four quarts sweet milk, stir in the emptyings, and one-half spoon of soda, with flour enough for a stiff batter, let it rise an hour, then mould and put in tins, and rise twenty minutes, bake in a hot oven.

PERCIE BARTON.

Vermont, April, 1868.

Preserving Wall Paper.

I saw in your last issue an inquiry of some one from Somerset, Mass., "how can wall paper be preserved from the ravages of the worm," &c. This is a thing that can be remedied. I have tried it with entire success. Make your paste as usual, and then mix in a little *pepper*, and there will be no more damage in that way.

MRS. OSMER HALE.

Glastenbury, Conn., April 27, 1868.

For the New England Farmer.

THE LILAC.

BY ANNE G. HALE.

Breeze, ever buoyant, in garden of beauty
Sporting with sunbeams and showers,—
Drinking the dews of the lily bell's chalice,
Stealing the breath of the flowers,
Cease thy wild wanderings, come to my casement!
See! I fling open the pane!
Long have I listened to hear at the lattice
The sound of thy pinions again.

Not the sweet perfume the violet lends thee,
Crushed by thy gentlest caress,
Nor all the odors unnumbered, untested,
Summer's gay sisterhood bless,
Can to my craving heart yield such a pleasure,—
Peace, consolation, can bring,
As the rich fragrance, unlaunched on my senses,
Waiting thy frolicsome wing.

Lightly uplifting the lilac's frail thyrses,
Drooping with fulness of life,
Bring me the odors she holds in her keeping—
Odors with vanished hopes rife.
Verdant the leaflets she spreads to the sunshine,
Fair the sweet blossoms she rears;
How the dim past as I gaze on her beauty
In its old glory appears!

Years counted up by their burdens of sorrow,
Flee from sad memory's grasp;
Once more, again, in the shade of the lilac,
Hands long departed I clasp;
Voices with those of the angels now blending,
Hear I to-day as of yore,
Singing, as then, all their songs of affection
Where the sweet lilac droops o'er.

Music more holy than anthems that echo
Through the cathedral's dim aisles,
Seem the glad greetings recalled by that vision,
Dearer than Heaven their smiles,
Haste, for the flowerets are fading and dying,
Waft me one sigh ere they fall!
Sacred 'twill be as the perfume of chaplets
Hiding the gloom of the pall.